

## SEARCH REQUEST FORM

Requestor's  
Name:

M. Borin

Serial  
Number:

08/480494

5-791

Date:

03/10/97

Phone:

305-4506

Art Unit:

18/11

## Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Please search by inventor/assignee and

1) 8-12 amino acid long peptide, comprising  
A - B - C - D - E - F - G - H - I - J, wherein

A = pyro-Glu; Ac-D-Nal (see below), Ac-D-Qal, Ac-Ser, Ac-D-Phe

B = His, Cl-D-Phe

C = Trp, D-Pal, D-Nal-D-Pal, D-Trp

D = Ser

E = ~~N-Me-Ala~~ N-Me-Ala, Tyr, N-Me-Tyr, Ser, Lys(I<sub>2</sub>), 4-Cl-Phe, His, Asn, Met, Ala, Arg, Ile

F = most important:  $\begin{array}{c} \text{X} \\ \diagup \quad \diagdown \\ \text{N} \quad \text{C} \\ | \quad || \\ \text{H, alk} \quad \text{O} \end{array}$  X = H, alk

Y = ylid, amine oxide, nitrile oxide, pyridine-N-oxide, pyridinium, sulfonium,  $\alpha$ -halocarbonyl, sulfate, sulfonate, halide.

G = Leu, Trp

H = Lys(I<sub>2</sub>), Glu, Met, Arg

I = Pro

J = Gly, D-Ala, Ala.

Nal = 3-(2-naphthyl)alaninyl

Pal = 3-(3'-pyridyl)alaninyl

Lys(I<sub>2</sub>) = N-ε-2-Pro-Lys

2) (LHRH or GnRH) antagonist or agonist <sup>hydrophobic or</sup> with  
3) Peptides of claims 15, 16, 23, 31, 47, 53, 54 <sup>dipolar or cationic or receptor-binding</sup> moiety or group.  
Please return the claims

Thank you

## STAFF USE ONLY

CRF bad  
2/6/97

Date completed:

6/2/97

Searcher:

Terminal time:

125

Elapsed time:

CPU time:

Total time:

125

Number of Searches:

2

Number of Databases:

7

Search Site

☒ STIC

☒ CM-1

☐ Pre-S

Type of Search

☐ N.A. Sequence

☒ A.A. Sequence

☐ Structure

☐ Bibliographic

Vendors

☒ IG Suite

☒ STN

☐ Dialog

☐ APS

☐ Geninfo

☐ SDC

☐ DARC/Questel

☐ Other

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```

Sequence 1, Application US/08480494A
GENERAL INFORMATION:
APPLICANT: Roeske, Roger W.
TITLE OF INVENTION: LHRH Antagonist Peptides
NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 State Street, Suite 510
CITY: Boston
STATE: Massachusetts
COUNTRY: USA
ZIP: 02109-1875
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/480,494A
FILING DATE: 07-JUN-1995
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: DeConti, Giulio A.
REGISTRATION NUMBER: 31,503
REFERENCE/DOCKET NUMBER: PPI-007
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
TELEFAX: (617)227-5941
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-480-494A-1
EHMSYGLRPG1

```

1) Search of their seq ID #1 (which is ~~correct~~ non-modified seqs)



08-Dec-1995  
#accessions A93780; A01411  
#reference A93780  
#authors Burgess, R.; Butcher, M.; Amoss, M.; Ling, N.; Monahan, M.; Rivier, J.; Fellows, R.; Blackwell, R.; Vale, W.; Gullermin, R.  
#journal Proc. Natl. Acad. Sci. U.S.A. (1972) 69:278-282  
#title Primary structure of the ovine hypothalamic luteinizing hormone-releasing factor (LRF).  
#cross-references MIMD:72094314  
#accession A93780  
##molecule-type protein  
##residues 1-10 #label BUR  
##note the natural and synthetic hormones have the same biological activity  
COMMENT This hypothalamic hormone stimulates the secretion of both luteinizing and follicle-stimulating hormones.  
CLASSIFICATION #superfamily gonadoliberin  
KEYWORDS amidated carboxyl end; hypothalamus; peptide hormone; pyroglutamic acid  
FEATURE 1  
10 #modified\_site pyrrolidone carboxylic acid (Gln) #status experimental  
#modified\_site amidated carboxyl end (Gly) #status experimental  
SUMMARY #length 10 #molecular-weight 1200 #checksum 4307  
SEQUENCE  
Initial Score = 9 Optimized Score = 9 Significance = 7.72  
Residue Identity = 90% Matches = 9 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 0  
X X  
EHMSYGLRPG  
|||||||  
OHMSYGLRPG  
X 10  
2. US-08-480-494A-1 (1-10)  
RHPG gonadoliberin - pig  
ENTRY RHPG #type complete  
TITLE gonadoliberin - pig  
ORIGIN #formal\_name Sus scrofa domestica #common\_name domestic pig  
DATE #sequence\_revision 13-Jul-1981 #text\_change 08-Dec-1995  
ACCESSION A01411  
REFERENCE A90172  
#authors Baba, Y.; Matsuo, H.; Schally, A.V.  
#journal Biochem. Biophys. Res. Commun. (1971) 44:459-463  
#title Structure of the porcine LH- and FSH-releasing hormone. II. Confirmation of the proposed structure by conventional sequential analyses.  
#cross-references MIMD:72114303  
#accession A01411  
##molecule-type protein  
##residues 1-10 #label BAB  
REFERENCE A90176  
#authors Matsuo, H.; Arimura, A.; Nair, R.M.G.; Schally, A.V.  
#journal Biochem. Biophys. Res. Commun. (1971) 45:822-827  
#title Synthesis of the porcine LH- and FSH-releasing hormone by the solid-phase method.  
#cross-references MIMD:72065376  
#accession A90176  
##note annotation: synthesis  
the synthetic and natural hormones have the same physicochemical and biological properties  
REFERENCE A90175  
#authors Baba, Y.; Arimura, A.; Schally, A.V.  
#journal Biochem. Biophys. Res. Commun. (1971) 45:483-487  
#title On the tryptophan residue in porcine LH and FSH-releasing hormone.  
#cross-references MIMD:72117544  
#accession A90175  
##note annotation

#note  
COMMENT This hypothalamic hormone stimulates the secretion of both luteinizing and follicle-stimulating hormones.  
CLASSIFICATION #superfamily gonadoliberin  
KEYWORDS amidated carboxyl end; hypothalamus; peptide hormone; pyroglutamic acid  
FEATURE 1  
10 #modified\_site pyrrolidone carboxylic acid (Gln) #status experimental  
#modified\_site amidated carboxyl end (Gly) #status experimental  
SUMMARY #length 10 #molecular-weight 1200 #checksum 4307  
SEQUENCE  
Initial Score = 9 Optimized Score = 9 Significance = 7.72  
Residue Identity = 90% Matches = 9 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 0  
X X  
EHMSYGLRPG  
|||||||  
OHMSYGLRPG  
X 10  
3. US-08-480-494A-1 (1-10)  
I78541 luteinizing hormone-releasing hormone - rhesus mac  
ENTRY I78541 #type fragment  
TITLE luteinizing hormone-releasing hormone - rhesus macaque (fragment)  
ORIGIN #formal\_name Macaca mulatta #common\_name rhesus macaque  
DATE 02-Aug-1996 #sequence\_revision 02-Aug-1996 #text\_change 02-Aug-1996  
ACCESSION I78541  
REFERENCE I58134  
#authors Ma, Y.J.; Costa, M.E.; Ojeda, S.R.  
#journal Neuroendocrinology (1994) 60:346-359  
#title Developmental expression of the genes encoding transforming growth factor alpha and its receptor in the hypothalamus of female rhesus macaques.  
#cross-references MIMD:95124501  
#accession I78541  
##status preliminary; translated from GB/EMBL/DBJ  
##molecule-type mRNA  
##residues 1-67 #label RES  
SUMMARY #cross-references GB:S75918; NID:g912831; CDS\_PID:g912832  
SEQUENCE #length 67 #checksum 9611  
Initial Score = 9 Optimized Score = 9 Significance = 7.72  
Residue Identity = 90% Matches = 9 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 0  
X 10  
EHMSYGLRPG  
|||||||  
OHMSYGLRPG  
X 10  
4. US-08-480-494A-1 (1-10)  
I51423 luteinizing-releasing hormone - African clawed fro  
ENTRY I51423 #type complete  
TITLE luteinizing-releasing hormone - African clawed frog  
ORIGIN #formal\_name Xenopus laevis #common\_name African clawed frog  
DATE 13-Sep-1996 #sequence\_revision 13-Sep-1996 #text\_change 13-Sep-1996  
ACCESSION I51423  
REFERENCE I51423  
#authors Hayes, W.P.; Wray, S.; Battey, J.F.  
#journal Endocrinology (1994) 134:1835-1845

#title The frog GnRH-I gene has a mammalian-like expression pattern  
and conserved domains in GnRH-associated peptide, but brain  
onset is delayed until metamorphosis.  
#cross-references WUID:94185563  
#accession I51423  
#status preliminary; translated from GB/EMBL/DBJ  
##molecule\_type DNA  
##residues 1-89 #label HAY  
##cross-references GB:L28040; NID:g496291; CDS\_PID:g496292

GENETICS  
#note  
SUMMARY gene name GnRH-I  
SEQUENCE #length 89 #molecular-weight 10246 #checksum 6150

Initial Score = 9 Optimized Score = 9 Significance = 7.72  
Residue Identity = 90% Matches = 9 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 0

X 10  
EHWSYGLRPG  
|||||  
OHWSYGLRPG  
X 30 X

5. US-08-480-494A-1 (1-10)  
A47578 gonadotropin-releasing hormone - mouse

ENTRY A47578 #type complete  
ORANISM gonadotropin-releasing hormone - mouse  
#formal\_name Mus musculus #common\_name house mouse  
DATE 31-Dec-1993 #sequence\_revision 31-Dec-1993 #text\_change  
02-Jun-1995

ACCESSIONS  
REFERENCE A47578  
#authors Mason, A.J.; Hayflick, J.S.; Zoeller, R.T.; Young III, W.S.;  
Phillips, H.S.; Nikolic, K.; Seeburg, P.H.  
#journal Science (1986) 234:1366-1371  
#title A deletion truncating the gonadotropin-releasing hormone gene  
is responsible for hypogonadism in the hpg mouse.  
#accession A47578  
#status preliminary  
##molecule\_type DNA  
##residues 1-90 #label MAS  
##cross-references EMBL:M14872  
CLASSIFICATION #superfamily gonadoliberin  
SUMMARY #length 90 #molecular-weight 10337 #checksum 7749  
SEQUENCE

Initial Score = 9 Optimized Score = 9 Significance = 7.72  
Residue Identity = 90% Matches = 9 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 0

X X  
EHWSYGLRPG  
|||||  
OHWSYGLRPG  
X 30

6. US-08-480-494A-1 (1-10)  
RHRTG gonadoliberin precursor - rat

ENTRY RHRTG #type complete  
TITLE gonadoliberin precursor - rat  
ALTERNATE\_NAMES GnRH; gonadotropin releasing hormone; LHRH; luteinizing  
hormone releasing hormone  
CONTAINS gonadotropin releasing hormone; prolactin release-inhibiting  
factor  
ORGANISM #formal\_name Rattus norvegicus #common\_name Norway rat  
DATE 31-Mar-1988 #sequence\_revision 31-Mar-1988 #text\_change  
08-Dec-1995  
ACCESSIONS A40147; B26173; A48410

REFERENCE A40147  
#authors Bond, C.T.; Hayflick, J.S.; Seeburg, P.H.; Adelman, J.P.  
#journal Mol. Endocrinol. (1989) 3:1257-1262  
#title The rat gonadotropin-releasing hormone: SH locus structure  
and hypothalamic expression.  
#cross-references WUID:89384661  
#accession A40147  
##molecule\_type DNA  
##residues 1-92 #label BON  
##cross-references GB:M31670

REFERENCE A94090  
#authors Adelman, J.P.; Mason, A.J.; Hayflick, J.S.; Seeburg, P.H.  
#journal Proc. Natl. Acad. Sci. U.S.A. (1986) 83:179-183  
#title Isolation of the gene and hypothalamic cDNA for the common  
precursor of gonadotropin-releasing hormone and prolactin  
release-inhibiting factor in human and rat.  
#cross-references WUID:86094338  
#accession B26173  
##molecule\_type mRNA  
##residues 1-92 #label ADE

REFERENCE A48410  
#authors Maier, C.C.; Marchetti, B.; LeBoeuf, R.D.; Blalock, J.E.  
#journal Cell. Mol. Neurobiol. (1992) 12:447-454  
#title Thymocytes express a mRNA that is identical to hypothalamic  
luteinizing hormone-releasing hormone mRNA.  
#cross-references WUID:93105480  
#accession A48410  
#status preliminary  
##molecule\_type nucleic acid  
##residues 1-92 #label MAI  
##cross-references NCBI:N121083  
##experimental\_source thymus  
#note sequence extracted from NCBI backbone  
COMMENT This hormone stimulates the secretion of both luteinizing and  
follicle-stimulating hormones.

GENETICS  
#introns 47/3; 79/3  
CLASSIFICATION #superfamily gonadoliberin  
KEYWORDS amidated carboxyl end; hypothalamus; peptide hormone;  
placenta; pyroglutamic acid; reproduction

FEATURE  
1-23 #domain signal sequence #status predicted #label SIG  
24-92 #product progadoliberin #status predicted #label PGV  
24-33 #product gonadoliberin #status predicted #label GLV  
37-92 #product prolactin release-inhibiting factor #status  
predicted #label PIF  
24 #modified\_site pyroglutamic carboxylic acid (Gln) (in  
mature form) #status predicted  
33 #modified\_site amidated carboxyl end (Gly) (amide in  
mature form following glycine) #status predicted  
SUMMARY #length 92 #molecular-weight 10500 #checksum 1405  
SEQUENCE

Initial Score = 9 Optimized Score = 9 Significance = 7.72  
Residue Identity = 90% Matches = 9 Mismatches = 1  
Gaps = 0 Conservative Substitutions = 0

X 10  
EHWSYGLRPG  
|||||  
OHWSYGLRPG  
X 30 X

7. US-08-480-494A-1 (1-10)  
RHHDG gonadoliberin precursor - human

ENTRY RHHDG #type complete  
TITLE gonadoliberin precursor - human  
ALTERNATE\_NAMES gonadotropin releasing hormone (GnRH); luteinizing hormone  
releasing hormone (LHRH)  
CONTAINS progadoliberin  
ORGANISM #formal\_name Homo sapiens #common\_name man

DATE 17-Mar-1987 #sequence\_revision 21-Jul-1995 #text\_change  
 06-Sep-1996  
 ACCESSIONS S05308; A26173; A93342; A90108; A01410; S45718  
 REFERENCE S05308  
 #authors Hayflick, J.S.; Adelman, J.P.; Seeburg, P.H.  
 #journal Nucleic Acids Res. (1989) 17:6403-6404  
 #title The complete nucleotide sequence of the human gonadotropin-releasing hormone gene.  
 #cross-references M01D:89366682  
 #accession S05308  
 #status translation not shown  
 ##molecule\_type DNA  
 ##residues 1-92 ##label HAY  
 ##cross-references EMBL:X15215  
 REFERENCE A94090  
 #authors Adelman, J.P.; Mason, A.J.; Hayflick, J.S.; Seeburg, P.H.  
 #journal Proc. Natl. Acad. Sci. U.S.A. (1986) 83:1179-1183  
 #title Isolation of the gene and hypothalamic cDNA for the common precursor of gonadotropin-releasing hormone and prolactin release-inhibiting factor in human and rat.  
 #cross-references M01D:86094338  
 #accession A26173  
 ##molecule\_type mRNA  
 ##residues 1-92 ##label ADE  
 ##cross-references GB:M12578  
 ##experimental\_source hypothalamus  
 REFERENCE A93342  
 #authors Seeburg, P.H.; Adelman, J.P.  
 #journal Nature (1984) 311:666-668  
 #title Characterization of cDNA for precursor of human luteinizing hormone releasing hormone.  
 #cross-references M01D:85012739  
 #accession A93342  
 ##molecule\_type mRNA  
 ##residues 1-15, 'S', 17-92 ##label SEE  
 ##cross-references GB:X01059  
 ##experimental\_source placenta  
 REFERENCE A90108  
 #authors Tan, L.; Rousseau, P.  
 #journal Biochem. Biophys. Res. Commun. (1982) 109:1061-1071  
 #title The chemical identity of the immunoreactive LHRH-like peptide biosynthesized in the human placenta.  
 #cross-references M01D:83126573  
 #accession A90108  
 ##molecule\_type protein  
 ##residues 24-33 ##label TAN  
 ##experimental\_source placental trophoblasts  
 REFERENCE S45718  
 #authors Leibovitz, D.; Koch, Y.; Pitzer, F.; Fridkin, M.; Dantes, A.; Baumeister, W.; Amsterdam, A.  
 #journal FEBS Lett. (1994) 346:203-206  
 #title Sequential degradation of the neuropeptide gonadotropin-releasing hormone by the 20 S granuloosa cell proteasomes.  
 #contents annotation: degradation pathway of synthetic hormone  
 GENETICS  
 #gene GDB:GNRH; LHRH; GRH  
 ##cross-references GDB:133746  
 #map\_position 8p21-8p11.2  
 #introns 47/3; 79/3  
 FUNCTION  
 #description hormone stimulates pituitary secretion of both luteotropin and follicotropin  
 #superfamily gonadoliberin  
 #amidated carboxyl end: hypothalamus; peptide hormone;  
 #placenta; pyroglutamic acid  
 CLASSIFICATION  
 #keywords  
 FEATURE  
 1-23 #domain signal sequence #status predicted #label SIG\  
 24-92 #product progonaoliberin #status predicted #label PGN\  
 24-33 #product gonadoliberin #status experimental #label MAT\  
 24 #modified site pyrrolidone carboxylic acid (Gln) (in mature form) #status experimental\  
 33 #modified site amidated carboxyl end (Gly) (amide in

SUMMARY  
 SEQUENCE  
 Initial Score = 9 Optimized Score = 9 Significance = 7.72  
 Residue Identity = 90% Matches = 9 Mismatches = 1  
 Gaps = 0 Conservative Substitutions = 0  
 X 10  
 EHWSYGLRPG  
 |||||  
 OHWSYGLRPG  
 X 30 X  
 8. US-08-480-494A-1 (1-10)  
 RHAQ1 gonadoliberin I - American alligator  
 ENTRY  
 TITLE RHAQ1 #type complete  
 #formal\_name gonadoliberin I - American alligator  
 #formal\_name Alligator mississippiensis #common\_name American alligator  
 DATE 31-Mar-1993 #sequence\_revision 31-Mar-1993 #text\_change  
 08-Dec-1995  
 ACCESSIONS A60066  
 REFERENCE A60066  
 #authors Lovejoy, D.A.; Fischer, W.H.; Parker, D.B.; McRoy, J.E.; Park, M.; Lance, V.; Swanson, P.; Rivier, J.E.; Sherwood, N.M.  
 #journal Regul. Pept. (1991) 33:105-116  
 #title Primary structure of two forms of gonadotropin-releasing hormone from brains of the American alligator (Alligator mississippiensis).  
 #cross-references M01D:91352338  
 #accession A60066  
 ##molecule\_type protein  
 ##residues 1-10 ##label LOV  
 CLASSIFICATION  
 #keywords #superfamily gonadoliberin  
 #amidated carboxyl end; hypothalamus; peptide hormone;  
 pyroglutamic acid  
 FEATURE  
 1 #modified site pyrrolidone carboxylic acid (Gln) #status experimental\  
 10 #modified site amidated carboxyl end (Gly) #status experimental  
 SUMMARY  
 SEQUENCE  
 #length 10 #molecular\_weight 1172 #checksum 4299  
 Initial Score = 8 Optimized Score = 8 Significance = 6.62  
 Residue Identity = 80% Matches = 8 Mismatches = 2  
 Gaps = 0 Conservative Substitutions = 0  
 X X  
 EHWSYGLRPG  
 |||||  
 OHWSYGLRPG  
 X 10  
 9. US-08-480-494A-1 (1-10)  
 S33507 gonadoliberin I - chicken  
 ENTRY  
 TITLE S33507 #type complete  
 #formal\_name gonadoliberin I - chicken  
 #formal\_name Alligator mississippiensis #common\_name chicken  
 DATE 06-Jan-1995 #sequence\_revision 06-Jan-1995 #text\_change  
 12-Apr-1995  
 ACCESSIONS S33507  
 REFERENCE S33507  
 #authors Dunn, I.C.; Chen, Y.; Hook, C.; Sharp, P.J.; Sang, H.M.

```
#submission      submitted to the EMBL Data Library, November 1992
#description      Characterization of the chicken pre-progonadotropin
#accession        S33507
#status           preliminary
#molecule_type   DNA
#residues         1-92 #label DUN
#cross-references EMBL:X69491

GENETICS
#introns          47/3; 79/3
CLASSIFICATION    #superfamily gonadoliberin
SUMMARY           #length 92 #molecular-weight 10206 #checksum 1102
SEQUENCE

Initial Score     -      8      Optimized score -      8      Significance - 6.62
Residue Identity  -      80%    Matches         -      8      Mismatches  - 2
Gaps              -      0      Conservative Substitutions - 0

X      10
EHWSYGLRPG
|||||
OHWSYGLRPG
X      30 X

10. US-08-480-494A-1 (1-10)
150739 gonadotropin-releasing hormone - Cichlid (Haplochr
ENTRY    150739 #type complete
TITLE    gonadotropin-releasing hormone - Cichlid (Haplochromis
ORGANISM burtoni)
#formal_name Haplochromis burtoni
DATE      13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change
13-Sep-1996
ACCESSION 150739
REFERENCE 150739
#authors   White, S.A.; Kasten, T.L.; Bond, C.T.; Adelman, J.P.;
#journal   Proc. Natl. Acad. Sci. U.S.A. (1995) 92:8363-8367
#title     Three gonadotropin-releasing hormone genes in one organism
#cross-references MIMD:95396797
#accession 150739
#status     preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues   1-98 #label WHI
#cross-references EMBL:U31865; CDS_P1D:905399
SUMMARY     #length 98 #molecular-weight 10856 #checksum 595
SEQUENCE

Initial Score     -      8      Optimized score -      8      Significance - 6.62
Residue Identity  -      80%    Matches         -      8      Mismatches  - 2
Gaps              -      0      Conservative Substitutions - 0

X      10
EHWSYGLRPG
|||||
OHWSYGLRPG
X      30 X
```



DE GONADOLIBERIN PRECURSOR (LHRH) (LUTEINIZING HORMONE RELEASING HORMONE)  
 DE (GONADOTROPIN RELEASING HORMONE) (GNRH) (LUTILIBERIN) (FRAGMENT).  
 GN LHRH.  
 OS MACACA MULATTA (RHEUS MACAQUE).  
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;  
 OC EUTHERIA; PRIMATES.  
 RN  
 [1]  
 RC SEQUENCE FROM N.A.  
 RP TISSUE-HYPOTHALAMUS;  
 RA MEDLINE; 95124501.  
 RA MA Y.J., COSTA M.E., OJEDA S.R.;  
 RL NEUROENDOCRINOLOGY 60:346-359(1994).  
 CC -1- FUNCTION: STIMULATES THE SECRETION OF BOTH LUTEINIZING AND  
 FOLLICLE-STIMULATING HORMONES.  
 CC -1- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS.  
 DR EMBL; S75918; G912832; -  
 KM CLEAVAGE ON PAIR OF BASIC RESIDUES; HORMONE; AMIDATION; HYPOTHALAMUS;  
 KW SIGNAL.  
 FT NON\_TER 1 1  
 FT SIGNAL <1 5 BY SIMILARITY.  
 FT CHAIN 6 >67 PROGONADOLIBERIN.  
 FT PEPTIDE 6 15 GONADOLIBERIN (BY SIMILARITY).  
 FT PEPTIDE 19 >67 GNHR-ASSOCIATED PEPTIDE (BY SIMILARITY).  
 FT ACT\_SITE 8 8 APPEARS TO BE ESSENTIAL FOR BIOLOGICAL  
 ACTIVITY (BY SIMILARITY).  
 FT MOD\_RES 6 6 PYRROLIDONE CARBOXYLIC ACID (BY  
 SIMILARITY).  
 FT MOD\_RES 15 15 AMIDATION (G-16 PROVIDE AMIDE GROUP) (BY  
 SIMILARITY).  
 FT NON\_TER 67 67  
 FT SEQUENCE 67 AA; 7573 MM; AFECF26B CRC32;  
 SQ  
 Initial Score = 9 Optimized Score = 9 Significance = 8.58  
 Residue Identity = 90% Matches = 9 Mismatches = 1  
 Gaps = 0 Conservative Substitutions = 0

X 10  
 EHMSYGLRPG  
 |||||  
 OHMSYGLRPG  
 X 10 X

2. US-08-480-494A-1 (1-10)  
 GONL\_XENIA GONADOLIBERIN I PRECURSOR (GONADOTROPIN-RELEASING  
 ID GONL\_XENIA STANDARD: PRT: 89 AA.  
 AC P45656;  
 DT 01-NOV-1995 (REL. 32, CREATED)  
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)  
 DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)  
 DE GONADOLIBERIN I PRECURSOR (GONADOTROPIN-RELEASING HORMONE I) (GNRH-I)  
 DE (LH-RH) (LUTILIBERIN I).  
 OS XENOPUS LAEVIS (AFRICAN CLAWED FROG).  
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; AMPHIBIA; ANURA.  
 RN  
 [1]  
 RP SEQUENCE FROM N.A.  
 RC TISSUE-FORERAIN;  
 RX MEDLINE; 94185563.  
 RA HAYES W.P., WRAY S., BATTERY J.F.;  
 RL ENDOCRINOLOGY 134:1835-1844(1994).  
 CC -1- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS.  
 DR EMBL; L28040; G496292; -  
 KM CLEAVAGE ON PAIR OF BASIC RESIDUES; HORMONE; AMIDATION; HYPOTHALAMUS;  
 KW SIGNAL.  
 FT SIGNAL 1 23  
 FT CHAIN 37 89 GONADOTROPIN-RELEASING HORMONE ASSOCIATED  
 FT CHAIN 37 89 PEPTIDE.  
 FT CHAIN 24 89 PROGONADOLIBERIN I.  
 FT PEPTIDE 24 33 GONADOLIBERIN I.  
 FT PEPTIDE 37 85 GNHR-ASSOCIATED PEPTIDE I (GAP).  
 FT MOD\_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.

FT MOD\_RES 33 33 AMIDATION (G-34 PROVIDE AMIDE GROUP).  
 SQ SEQUENCE 89 AA; 10246 MM; 7946E3DB CRC32;  
 Initial Score = 9 Optimized Score = 9 Significance = 8.58  
 Residue Identity = 90% Matches = 9 Mismatches = 1  
 Gaps = 0 Conservative Substitutions = 0

X 10  
 EHMSYGLRPG  
 |||||  
 OHMSYGLRPG  
 X 30 X

3. US-08-480-494A-1 (1-10)  
 GONL\_MOUSE GONADOLIBERIN PRECURSOR (LHRH) (LUTEINIZING HORMON  
 ID GONL\_MOUSE STANDARD: PRT: 90 AA.  
 AC P1362;  
 DT 01-JAN-1990 (REL. 13, CREATED)  
 DT 01-JAN-1990 (REL. 13, LAST SEQUENCE UPDATE)  
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)  
 DE GONADOLIBERIN PRECURSOR (LHRH) (LUTEINIZING HORMONE RELEASING HORMONE)  
 DE (GONADOTROPIN RELEASING HORMONE) (GNRH) (LUTILIBERIN).  
 GN GNHR.  
 OS MUS MUSCULUS (MOUSE).  
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;  
 OC EUTHERIA; RODENTIA.  
 RN  
 [1]  
 RP SEQUENCE FROM N.A.  
 RX MEDLINE; 87069928.  
 RA MASON A.J., HAYFLICK J.S., ZOELLER R.T., YOUNG W.S. III,  
 RA PHILLIPS H.S., NIKOLICS K., SEEBURG P.H.;  
 RL SCIENCE 234:1366-1371(1986).  
 CC -1- FUNCTION: STIMULATES THE SECRETION OF BOTH LUTEINIZING AND  
 FOLLICLE-STIMULATING HORMONES.  
 CC CC  
 DR EMBL; M14872; G387175; -  
 DR PROSITE; P500473; GNHR.  
 KW CLEAVAGE ON PAIR OF BASIC RESIDUES; HORMONE; AMIDATION; HYPOTHALAMUS;  
 KW PLACENTA; SIGNAL.  
 FT SIGNAL 1 21  
 FT CHAIN 22 30 PROGONADOLIBERIN.  
 FT PEPTIDE 22 31 GONADOLIBERIN.  
 FT PEPTIDE 35 90 PROLACTIN RELEASE-INHIBITING FACTOR.  
 FT ACT\_SITE 24 24 APPEARS TO BE ESSENTIAL FOR BIOLOGICAL  
 ACTIVITY.  
 FT MOD\_RES 22 32 PYRROLIDONE CARBOXYLIC ACID.  
 FT MOD\_RES 31 31 AMIDATION (G-32 PROVIDE AMIDE GROUP).  
 SQ SEQUENCE 90 AA; 10337 MM; 8D526631 CRC32;  
 Initial Score = 9 Optimized Score = 9 Significance = 8.58  
 Residue Identity = 90% Matches = 9 Mismatches = 1  
 Gaps = 0 Conservative Substitutions = 0

X X  
 EHMSYGLRPG  
 |||||  
 OHMSYGLRPG  
 X 30 X

4. US-08-480-494A-1 (1-10)  
 GONL\_PIG GONADOLIBERIN PRECURSOR (LHRH) (LUTEINIZING HORMON  
 ID GONL\_PIG STANDARD: PRT: 91 AA.  
 AC P49921;  
 DT 01-OCT-1996 (REL. 34, CREATED)  
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)  
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)  
 DE GONADOLIBERIN PRECURSOR (LHRH) (LUTEINIZING HORMONE RELEASING HORMONE)  
 DE (GONADOTROPIN RELEASING HORMONE) (GNRH) (LUTILIBERIN).  
 GN GNHR.  
 OS SUS SCROFA (PIG).

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OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; ARTIODACTYLA.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-HYPOTHALAMUS;
RA WEISNER G.D., MATTERI R.L., BECKER B.A.;
RL SUBMITTED (MAY-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE OF 24-33.
RX MEDLINE: 72114303.
RA BABA Y., MATSUO H., SCHALLY A.V.;
RL BIOCHEM. BIOPHYS. RES. COMMUN. 44:459-463(1971).
RN [3]
RP SYNTHESIS OF GONADOLIBERIN.
RX MEDLINE: 72065376.
RA MATSUO H., ARIMURA A., NAIR R.M.G., SCHALLY A.V.;
RL BIOCHEM. BIOPHYS. RES. COMMUN. 45:822-827(1971).
RN [4]
RP SYNTHESIS OF GONADOLIBERIN.
RX MEDLINE: 72117544.
RA BABA Y., ARIMURA A., SCHALLY A.V.;
RL BIOCHEM. BIOPHYS. RES. COMMUN. 45:483-487(1971).
CC -I- FUNCTION: STIMULATES THE SECRETION OF BOTH LUTEINIZING AND
CC FOLLICLE-STIMULATING HORMONES.
DR EMBL: L32864; G487876; -.
DR PIR: A01411; RHPGG.
KW CLEAVAGE ON PAIR OF BASIC RESIDUES; HORMONE; AMIDATION; HYPOTHALAMUS;
KM PLACENTA; SIGNAL.
FT SIGNAL 1 23
FT CHAIN 24 91 PROGONADOLIBERIN.
FT PEPTIDE 24 33 GONADOLIBERIN.
FT PEPTIDE 34 91 GNRH-ASSOCIATED PEPTIDE.
FT ACT_SITE 26 26 APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
FT ACTIVITY.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.
FT MOD_RES 33 33 AMIDATION (G-34 PROVIDE AMIDE GROUP).
SQ SEQUENCE 91 AA; 10090 MW; 89916A5E CRC32;
Initial Score = 9 Optimized Score = 9 Significance = 8.58
Residue Identity = 90% Matches = 9 Mismatches = 1
Gaps = 0 Conservative Substitutions = 0

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X 10
EHWSYGLRPG
|||||
OHWSYGLRPG
X 30 X

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5. US-08-480-494A-1 (1-10)
GONL_RAT GONADOLIBERIN PRECURSOR (LHRH) (LUTEINIZING HORMON)
ID GONL_RAT STANDARD: PRT: 92 AA.
AC P07490;
DT 01-APR-1988 (REL. 07, CREATED)
DT 01-APR-1988 (REL. 07, LAST SEQUENCE UPDATE)
DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
DE GONADOLIBERIN PRECURSOR (LHRH) (LUTEINIZING HORMONE)
DE (GONADOTROPIN RELEASING HORMONE) (GNRH) (LULIBERIN).
GN GNRH.
OS RATUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; RODENTIA.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE: 86094338.
RA ADELMAN J.P., MASON A.J., HAYFLICK J.S., SEEBURG P.H.;
RL PROC. NATL. ACAD. SCI. U.S.A. 83:179-183(1986).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE: 89384661.
RA BOND C.T., HAYFLICK J.S., SEEBURG P.H., ADELMAN J.P.;
RL MOL. ENDOCRINOL. 3:1257-1262(1989).

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RN [3]
RP SEQUENCE FROM N.A.
RC TISSUE-THYMUS;
RX MEDLINE: 93105480.
RA MAIER C.C., MARCHETTI B., LEBOUF R.D., BLALOCK J.E.;
RL CELL. MOL. NEUROBIOL. 12:447-454(1992).
RN [4]
RP SEQUENCE OF 1-47 FROM N.A.
RC TISSUE-HEART;
RX MEDLINE: 87149087.
RA ADELMAN J.P., BOND C.T., DOUGLASS J., HERBERT E.;
RL SCIENCE 235:1514-1517(1987).
CC -I- FUNCTION: STIMULATES THE SECRETION OF BOTH LUTEINIZING AND
CC FOLLICLE-STIMULATING HORMONES.
CC -I- TISSUE SPECIFICITY: CENTRAL NERVOUS SYSTEM.
DR EMBL: S50870; G262060; -.
DR EMBL: M12579; G204446; -.
DR EMBL: M1670; G204448; -.
DR EMBL: M15527; E13083; -.
DR EMBL: M15529; E13081; -.
DR EMBL: M15528; E13080; -.
DR PIR: B26173; RHRG.
DR PIR: A48410; A48410.
DR PROSITE: P500473; GNRH.
KW CLEAVAGE ON PAIR OF BASIC RESIDUES; HORMONE; AMIDATION; HYPOTHALAMUS;
KM PLACENTA; SIGNAL.
FT SIGNAL 1 23
FT CHAIN 24 92
FT PEPTIDE 24 33 GONADOLIBERIN.
FT PEPTIDE 37 92 PROLACTIN RELEASE-INHIBITING FACTOR.
FT ACT_SITE 26 26 APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
FT ACTIVITY.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.
FT MOD_RES 33 33 AMIDATION (G-34 PROVIDE AMIDE GROUP).
SQ SEQUENCE 92 AA; 10500 MW; AB3CB0DC CRC32;
Initial Score = 9 Optimized Score = 9 Significance = 8.58
Residue Identity = 90% Matches = 9 Mismatches = 1
Gaps = 0 Conservative Substitutions = 0

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X 10
EHWSYGLRPG
|||||
OHWSYGLRPG
X 30 X

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6. US-08-480-494A-1 (1-10)
GONL_HUMAN GONADOLIBERIN PRECURSOR (LHRH) (LUTEINIZING HORMON)
ID GONL_HUMAN STANDARD: PRT: 92 AA.
AC P01148;
DT 21-JUL-1986 (REL. 01, CREATED)
DT 01-APR-1988 (REL. 07, LAST SEQUENCE UPDATE)
DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
DE GONADOLIBERIN PRECURSOR (LHRH) (LUTEINIZING HORMONE)
DE (GONADOTROPIN RELEASING HORMONE) (GNRH) (LULIBERIN).
GN GNRH OR LHRH.
OS HOMO SAPIENS (HUMAN). AND OVIS ARIES (SHEEP).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; MAMMALIA;
OC EUTHERIA; PRIMATES.
RN [1]
RP SEQUENCE FROM N.A.
RC SPECIES-HUMAN;
RX MEDLINE: 89366682.
RA HAYFLICK J.S., ADELMAN J.P., SEEBURG P.H.;
RL NUCLEIC ACIDS RES. 17:6403-6403(1989).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE: 86094338.
RA ADELMAN J.P., MASON A.J., HAYFLICK J.S., SEEBURG P.H.;
RL PROC. NATL. ACAD. SCI. U.S.A. 83:179-183(1986).

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RN [3]
RP SEQUENCE FROM N.A.
RC SPECIES=HUMAN;
RX MEDLINE: 85012739.
RA SEEBURG P.H., ADELMAN J.P.;
RL NATURE 311:666-668(1984).
RN [4]
RP SEQUENCE OF 24-33.
RC SPECIES=HUMAN;
RX MEDLINE: 83126573.
RA TAN L., ROUSSEAU P.;
RL BIOCHEM. BIOPHYS. RES. COMMUN. 109:1061-1071(1982).
RN [5]
RP SEQUENCE OF 24-33.
RC SPECIES=SHEEP;
RX MEDLINE: 72094314.
RA BURGUS R., BUTCHER M., AMOSS M., LING N., MONAHAN M., RIVIER J.,
RL FELLOWS R., BLACKWELL R., VALE W., GUILLEMIN R.;
CC PROC. NATL. ACAD. SCI. U.S.A. 69:278-282(1972).
CC -1- FUNCTION: STIMULATES THE SECRETION OF BOTH LUTEINIZING AND
FOLLICLE-STIMULATING HORMONES.
DR EMBL: X01059; G34357; -.
DR EMBL: M12578; G386749; -.
DR EMBL: X15215; G31956; -.
DR PIR: A01410; RHHUG.
DR PIR: A93780; RSHHG.
DR PIR: A26173; A26173.
DR PIR: S05308; S05308.
DR MIM: 152760; -.
DR PROSITE: PS00473; GNRH.
KW CLEAVAGE ON PAIR OF BASIC RESIDUES; HORMONE; AMIDATION; HYPOTHALAMUS;
KM PLACENTA; SIGNAL.
FT SIGNAL 1 23
FT CHAIN 24 92 PROGONADOLIBERIN.
FT PEPTIDE 24 33 GONADOLIBERIN.
FT ACT_SITE 26 26 GNRH-ASSOCIATED PEPTIDE.
FT MOD_RES 24 24 APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
ACTIVITY.
FT MOD_RES 33 33 PYRROLIDONE CARBOXYLIC ACID.
FT CONFLICT 16 16 AMIDATION (G-34 PROVIDE AMIDE GROUP).
SQ SEQUENCE 92 AA; 10380 MW; ABS06BE6 CRC32;

Initial Score = 9 Optimized Score = 9 Significance = 8.58
Residue Identity = 90% Matches = 9 Mismatches = 1
Gaps = 0 Conservative Substitutions = 0

X 10
EHWSYGLRPG
|||||
OHWSYGLRPG
X 30 X

7. US-08-480-494A-1 (1-10)
GONL_ALIMI GONADOLIBERIN I (GONADOTROPIN-RELEASING HORMONE I)
ID GONL_ALIMI STANDARD; PRT; 10 AA.
AC P37041; P20407.
DT 01-FEB-1991 (REL. 17, CREATED)
DT 01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)
DT 01-JUN-1994 (REL. 29, LAST ANNOTATION UPDATE)
DE GONADOLIBERIN I (GONADOTROPIN-RELEASING HORMONE I) (GNRH-I) (LH-RH I)
DE (LULIBERIN I).
OS ALLIGATOR MISSISSIPPIENSIS (AMERICAN ALLIGATOR).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; REPTILIA;
OC ARCHOSAURIA.
RN [1]
RP SEQUENCE.
RC TISSUE=BRAIN;
RX MEDLINE: 91352338.
RA LOVEJOY D.A., FISCHER W.H., PARKER D.B., MCRODY J.E., PARK M.,
RA LANCE V., SWANSON P., RIVIER J.E., SHERWOOD N.M.;

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RL REGU. PEPT. 33:105-116(1991).
CC -1- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS.
DR PIR: A60066; RHAQ1.
DR PROSITE: PS00473; GNRH.
KW HORMONE; AMIDATION; HYPOTHALAMUS.
FT MOD_RES 1 1 PYRROLIDONE CARBOXYLIC ACID.
FT MOD_RES 10 10 AMIDATION.
SQ SEQUENCE 10 AA; 1172 MW; 4DDA2516 CRC32;

Initial Score = 8 Optimized Score = 8 Significance = 7.36
Residue Identity = 80% Matches = 8 Mismatches = 2
Gaps = 0 Conservative Substitutions = 0

X X
EHWSYGLRPG
|||||
OHWSYGLRPG
X 10

8. US-08-480-494A-1 (1-10)
GONL_CHICK GONADOLIBERIN I PRECURSOR (GONADOTROPIN-RELEASING
HORMONE I)
ID GONL_CHICK STANDARD; PRT; 92 AA.
AC P37042; P20407.
DT 01-FEB-1991 (REL. 17, CREATED)
DT 01-JUN-1994 (REL. 29, LAST SEQUENCE UPDATE)
DT 01-JUN-1994 (REL. 29, LAST ANNOTATION UPDATE)
DE GONADOLIBERIN I PRECURSOR (GONADOTROPIN-RELEASING HORMONE I) (GNRH-I)
DE (LH-RH I) (LULIBERIN I).
OS GALUS GALLUS (CHICKEN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; TETRAPODA; AVES; NEOGNATHAE;
OC GALLIFORMES.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=WHITE LEGHORN;
RX MEDLINE: 94059355.
RA DUNN I.C., CHEN Y., HOOK C., SHARP P.J., SANG H.M.;
RL J. MOL. ENDOCRINOL. 11:19-29(1993).
RN [2]
RP SEQUENCE OF 24-33.
RC TISSUE=HYPOTHALAMUS;
RX MEDLINE: 82265778.
RA KING J.A., MILAR R.P.;
RL J. BIOL. CHEM. 257:10729-10732(1982).
RN [3]
RP SEQUENCE OF 24-33.
RC TISSUE=HYPOTHALAMUS;
RX MEDLINE: 82265777.
RA KING J.A., MILAR R.P.;
RL S. AFR. J. SCI. 78:124-125(1982).
RN [4]
RP SYNTHESIS OF 24-33.
RX MEDLINE: 82265777.
RA KING J.A., MILAR R.P.;
RL J. BIOL. CHEM. 257:10722-10728(1982).
CC -1- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS.
DR EMBL: X69491; G311612; -.
DR PIR: S33507; S33507.
DR PROSITE: PS00473; GNRH.
KW CLEAVAGE ON PAIR OF BASIC RESIDUES; HORMONE; AMIDATION; HYPOTHALAMUS;
KM SIGNAL.
FT SIGNAL 1 23
FT CHAIN 24 92 PROGONADOLIBERIN I.
FT PEPTIDE 24 33 GONADOLIBERIN I.
FT ACT_SITE 26 26 GNRH-ASSOCIATED PEPTIDE I.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.
FT MOD_RES 33 33 AMIDATION (G-34 PROVIDE AMIDE GROUP).
SQ SEQUENCE 92 AA; 10206 MW; BFEA808F CRC32;

Initial Score = 8 Optimized Score = 8 Significance = 7.36
Residue Identity = 80% Matches = 8 Mismatches = 2
Gaps = 0 Conservative Substitutions = 0

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X  
EHWSYGLRPG  
|||||  
OHWSYGLSPG  
X 30 X

9. US-08-480-494A-1 (1-10)  
GON3\_SPAU GONADOLIBERIN III PRECURSOR (GONADOTROPIN-RELEASEIN

ID GON3\_SPAU STANDARD; PRT; 95 AA.  
AC P51919;  
DT 01-OCT-1996 (REL. 34, CREATED)  
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)  
DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)  
DE GONADOLIBERIN III PRECURSOR (GONADOTROPIN-RELEASING HORMONE III)  
DE (GNRH-III) (LH-RH III) (LULIBERIN III) (SBNRHH).  
OS SPARUS AURATA (GILTHEAD SEA BREAM).  
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; PISCES; GNATHOSTOMATA;  
OC OSTEICHTHYES; ACTINOPTERYGII; PERCIFORMES.  
RN [1]  
RP SEQUENCE FROM N.A.  
RC TISSUE-BRAIN;  
RX MEDLINE: 95268499.  
RA GOTTLIEF Y., ELIZUR A., CHOW M., CHEN T.T., ZOHAR Y.;  
RL MOL. MAR. BIOL. BIOTECHNOL. 4:27-35(1995).  
RN [2]  
RP SEQUENCE OF 26-35.  
RC TISSUE-BRAIN;  
RX MEDLINE: 95083645.  
RA POWELL J.F.F., ZOHAR Y., ELIZUR A., PARK M., FISCHER W.H.,  
RA CRAIG A.G., RIVIER J.E., LOVEJOY D.A., SHERWOOD N.M.;  
RL PROC. NATL. ACAD. SCI. U.S.A. 91:12081-12085(1994).  
CC -1- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS.  
CC -1- MASS SPECTROMETRY: MW=113.6; METHOD-MALDI; RANGE=26-35.  
DR EMBL: U30320; G987490; -;  
KW CLEAVAGE ON PAIR OF BASIC RESIDUES; HORMONE; AMIDATION; HYPOTHALAMUS;  
KW SIGNAL; MULTIGENE FAMILY.  
FT SIGNAL 1 25  
FT CHAIN 26 95 PROGONADOLIBERIN III.  
FT PEPTIDE 26 35 GONADOLIBERIN III.  
FT PERIDE 39 95 GNRH-ASSOCIATED PEPTIDE III (POTENTIAL).  
FT MOD\_RES 26 26 PYRROLIDONE CARBOXYLIC ACID.  
FT MOD\_RES 35 35 AMIDATION (G-32 PROVIDE AMIDE GROUP).  
SQ SEQUENCE 95 AA; 10753 MW; 4FE671EC CRC32;

Initial Score = 8 Optimized Score = 8 Significance = 7.36  
Residue Identity = 80% Matches = 8 Mismatches = 2  
Gaps = 0 Conservative Substitutions = 0

X  
EHWSYGLRPG  
|||||  
OHWSYGLSPG  
X 30 X

10. US-08-480-494A-1 (1-10)  
GON3\_HAPBU GONADOLIBERIN III PRECURSOR (GONADOTROPIN-RELEASEIN

ID GON3\_HAPBU STANDARD; PRT; 98 AA.  
AC P51918;  
DT 01-OCT-1996 (REL. 34, CREATED)  
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)  
DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)  
DE GONADOLIBERIN III PRECURSOR (GONADOTROPIN-RELEASING HORMONE III)  
DE (GNRH-III) (LH-RH III) (LULIBERIN III).  
OS HAPLOCHROMIS BURTONI.  
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; PISCES; GNATHOSTOMATA;  
OC OSTEICHTHYES; ACTINOPTERYGII; PERCIFORMES.  
RN [1]  
RP SEQUENCE FROM N.A.  
RX MEDLINE: 95396797.

RA WHITE S.A., KASTEN T.L., BOND C.T., ADELMAN J.P., FERNALD R.D.;  
RL PROC. NATL. ACAD. SCI. U.S.A. 92:8363-8367(1995).  
RN [2]  
RP SEQUENCE OF 23-32.  
RC TISSUE-PITUITARY;  
RX MEDLINE: 95372591.  
RA POWELL J.F.F., FISCHER W.H., PARK M., CRAIG A.G., RIVIER J.E.,  
RA WHITE S.A., FRANCIS R.C., FERNALD R.D., LICHT P., WARBY C.,  
RA SHERWOOD N.M.;  
RL REGUL. PEPT. 57:43-53(1995).  
CC -1- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS. MAY BE  
CC RESPONSIBLE FOR THE REGULATION OF THE HYPOTHALMIC-PITUITARY-  
CC GONADAL AXIS.  
CC -1- MASS SPECTROMETRY: MW=113.9; METHOD-MALDI; RANGE=23-32.  
CC -1- TISSUE SPECIFICITY: SYNTHESIZED IN PREOPTIC NEURONS AND IS  
CC TRANSPORTED TO THE PITUITARY IN THE PREOPTIC-HYPHOPHYSEAL AXONS.  
DR EMBL: U31865; G905399; -;  
KW CLEAVAGE ON PAIR OF BASIC RESIDUES; HORMONE; AMIDATION; HYPOTHALAMUS;  
KW SIGNAL; MULTIGENE FAMILY.  
FT SIGNAL 1 22  
FT CHAIN 23 98 PROGONADOLIBERIN III.  
FT PEPTIDE 23 32 GONADOLIBERIN III.  
FT PERIDE 36 98 GNRH-ASSOCIATED PEPTIDE III (POTENTIAL).  
FT MOD\_RES 23 23 PYRROLIDONE CARBOXYLIC ACID.  
FT MOD\_RES 32 32 AMIDATION (G-32 PROVIDE AMIDE GROUP).  
SQ SEQUENCE 98 AA; 10856 MW; 114EF72 CRC32;

Initial Score = 8 Optimized Score = 8 Significance = 7.36  
Residue Identity = 80% Matches = 8 Mismatches = 2  
Gaps = 0 Conservative Substitutions = 0

X  
EHWSYGLRPG  
|||||  
OHWSYGLSPG  
X 30 X



KW gonadorelin.  
OS Synthetic.  
FH Key f Location/Qualifiers  
FT Modified site 1  
FT /note="pyroglutamic acid"  
FT Modified site 10  
FT /note="Gly-NH<sub>2</sub>"  
PN CA1335403-C.  
PD 25-APR-1995.  
PR 06-MAY-1988; 566195.  
PA (BOE) BIO-MEGA/BOEHRINGER INGELHEIM RES INC.  
PI Gauthier JA.  
DR WPI; 95-179260/24.  
PT Prep. of luteinizing hormone and follicle stimulating hormone  
PT releasing peptide(s) - by cleaving a protected non-peptide resin  
PT by photolysis to remove the support, coupling with glycineamide and  
PT deprotecting  
PS Claim 1; 18pp; English.  
CC A new method is provided for preparing a decapeptide of formula  
CC  $\text{Pglu-His-Tyr-Ser-Tyr-Xaa-Leu-Arg-Pro-Gly-NH}_2$ , in which a protected  
CC nonapeptide corresponding to the N-terminal of the peptide is first  
CC prepared on a benzhydrylamine resin, the Pro residue being attached  
CC to the resin via a photosensitive linker. The nonapeptide is cleaved  
CC from the resin by photolysis, the C-terminal is activated, and the  
CC product is coupled with glycineamide to add the Gly-NH<sub>2</sub>. The  
CC decapeptide is then deprotected. In the decapeptide, Xaa is Gly (giving  
CC gonadorelin; the present sequence), D-2-Nal or D-Tyr.  
SQ Sequence 10 AA;  
SQ 0 A; 1 R; 0 N; 0 D; 0 B; 0 C; 0 Q; 1 E; 0 Z; 2 G; 1 H;  
SQ 0 I; 1 L; 0 K; 0 M; 0 F; 1 P; 1 S; 0 T; 1 Y; 0 V;  
Initial Score = 10 Optimized Score = 10 Significance = 7.42  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X 10

2. US-08-480-494A-1 (1-10)  
R86845 Gonadotropin releasing hormone.

ID R86845 standard; peptide; 10 AA.  
AC R86845;  
DT 22-MAR-1996 (first entry)  
DE Gonadotropin releasing hormone.  
KW Gonadotropin releasing hormone; GnRH; motility disorder;  
KW functional bowel disease; leuprolide acetate; luteinizing hormone;  
KW progesterone; relaxin; autonomic nervous system; drug delivery; therapy;  
KW irritable bowel syndrome; diabetes; scleroderma; Parkinson's disease.  
OS Synthetic.  
FH Key Location/Qualifiers  
FT Modified site 1  
FT /label="OTHER"  
FT /note="pyroglutamic acid"  
FT Cleavage site 6..7  
FT Modified site 10  
FT /note="amidated"  
PN US5434136-A.  
PD 18-JUL-1995.  
PR 14-DEC-1990; 626402.  
PR 14-DEC-1990; US-626402.  
PR 14-AUG-1991; US-744977.  
PR 19-OCT-1992; US-965675.  
PA (MATH/) MATHIAS J R.  
PI Mathias JR;  
DR WPI; 95-263259/34.  
PT Treating motility disorders associated with systemic lupus  
PT erythematosus - by admin. of gonadotropin releasing hormone

PT analogue, to control nausea, vomiting, abdominal pain etc.  
PS Disclosure; Column 3; 14pp; English.  
CC This sequence represents naturally occurring gonadotropin releasing  
CC hormone (GnRH). Analogues of GnRH are represented by R86846-56.  
CC Motility disorders, including functional bowel disease, can be treated by  
CC the administration of one of the GnRH analogues shown here (e.g.  
CC leuprolide acetate). This is due to the GnRH analogue inhibiting  
CC production of reproductive hormones such as luteinizing hormone,  
CC progesterone and relaxin. Motility disorders are caused from  
CC abnormalities of the autonomic nervous system. Due to this, the GnRH  
CC analogues may also exert effects on the autonomic nervous system. The  
CC GnRH analogues are administered by injection (which may be intravenous,  
CC subcutaneous or intramuscular), or by a drug delivery system. The drug  
CC delivery system can comprise a drug implant with timed release, a nasal  
CC spray or an injection of a long-lasting depo form. This method is used  
CC to alleviate symptoms such as nausea, vomiting, abdominal pain and  
CC altered bowel habits. The sequences can be used to treat motility  
CC disorders in a wide variety of other diseases including irritable bowel  
CC syndrome, diabetes, scleroderma and Parkinson's disease.  
SQ Sequence 10 AA;  
SQ 0 A; 1 R; 0 N; 0 D; 0 B; 0 C; 0 Q; 1 E; 0 Z; 2 G; 1 H;  
SQ 0 I; 1 L; 0 K; 0 M; 0 F; 1 P; 1 S; 0 T; 1 Y; 0 V;  
Initial Score = 10 Optimized Score = 10 Significance = 7.42  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X 10

3. US-08-480-494A-1 (1-10)  
R75152 Gonadotropin releasing hormone.

ID R75152 standard; Peptide; 10 AA.  
AC R75152;  
DT 19-DEC-1995 (first entry)  
DE Gonadotropin releasing hormone.  
KW Gonadotropin releasing hormone; GnRH; gonadolibertin; reproduction;  
KW transgenic animal; transgenic fish; transgenic fowl.  
OS Mammalia.  
PN WO9512309-A1.  
PD 11-MAY-1995.  
PR 04-NOV-1994; U12763.  
PR 05-NOV-1993; US-147771.  
PA (STRD) UNIV LELAND STANFORD JUNIOR.  
PA (UYOR-) UNIV OREGON HEALTH SCI.  
PA (UYOR-) UNIV OREGON STATE.  
PI Adelman JP, Fernald RD;  
DR WPI; 95-185526/24.  
PT New gonadotropin releasing hormone preprohormone DNA - used to  
PT develop prods. for regulation of reproductive function and diagnosis  
PT of reproductive capacity and disease  
PS Disclosure; Fig.1a; 85pp; English.  
CC 8 different forms of GnRH (given in R75152-59) have previously  
CC been isolated from vertebrate species. A precursor for an  
CC additional form of GnRH, (Ser8)-GnRH (R75151), has now been  
CC obtd.  
SQ Sequence 10 AA;  
SQ 0 A; 1 R; 0 N; 0 D; 0 B; 0 C; 0 Q; 1 E; 0 Z; 2 G; 1 H;  
SQ 0 I; 1 L; 0 K; 0 M; 0 F; 1 P; 1 S; 0 T; 1 Y; 0 V;  
Initial Score = 10 Optimized Score = 10 Significance = 7.42  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG

X 10

4. US-08-480-494A-1 (1-10)  
R62689 LHRH hapten for attachment to universal immune sti

ID R62689 standard; peptide; 10 AA.

AC R62689;

DT 10-SEP-1995 (first entry)

DE LHRH hapten for attachment to universal immune stimulator.

KW Helper T cell epitope; universal immune stimulator; invasin; hapten;

KW vaccine; LHRH; luteinising hormone releasing hormone; prostate;

KW androgen-dependent carcinoma; antitumour; infertility.

OS Homo sapiens.

PN WO9425060-A.

PD 10-NOV-1994.

PF 28-APR-1994; U04832.

PR 27-APR-1993; US-057166.

PR 14-APR-1994; US-229275.

PA (LADD/) LADD A E.

PA (WANG/) WANG C Y.

PA (ZAMB/) ZAMB T.

PI Ladd AE, Mang CY, Zamb T;

DR MPI; 94-357910/44.

PT Immunogenic luteinising hormone releasing hormone peptide(s) -

PS Claim 6; Page 104; 213pp; English.

CC Synthetic immunogenic peptides are provided in which a universal immune

CC stimulator is linked to a peptide or protein hapten containing B cell

CC and/or cytotoxic T lymphocyte epitopes, giving a product which causes

CC potent immune responses to the coupled peptide or protein. The

CC stimulator consists of (A) a promiscuous helper T cell epitope (Th)

CC which elicits an immune response to the coupled peptide in members of

CC a heterogeneous population expressing diverse HLA phenotypes, and (B)

CC an adjuvant peptide sequence from the invasin protein of Yersinia.

CC Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the

CC invasin and Th domains and between the immune stimulator and hapten

CC components. When the hapten is LHRH, then optionally the invasin domain

CC can be omitted from the immune stimulator component.

CC The present sequence represents an LHRH hapten which can be

CC attached to the stimulator to provide a potent vaccine for

CC treating e.g. prostatic hyperplasia, androgen-dependent carcinoma,

CC prostatic carcinoma, testicular carcinoma, endometriosis, benign

CC uterine tumours, recurrent functional ovarian cysts, (severe) or

CC premenstrual syndrome or oestrogen-dependent breast cancer, or for

CC induction of infertility.

SQ Sequence 10 AA;

SQ 0 A; 1 R; 0 N; 0 D; 0 B; 0 C; 0 Q; 1 E; 0 Z; 2 G; 1 H;

SQ 0 I; 1 L; 0 K; 0 M; 0 F; 1 P; 1 S; 0 T; 1 W; 1 Y; 0 V;

Initial Score = 10 Optimized Score = 10 Significance = 7.42

Residue Identity = 100% Matches = 10 Mismatches = 0

Gaps = 0 Conservative Substitutions = 0

X X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10

5. US-08-480-494A-1 (1-10)  
R26819 LH releasing hormone antagonists.

ID R26819 standard; peptide; 10 AA.

AC R26819;

DT 10-FEB-1993 (first entry)

DE LH releasing hormone antagonists.

KW Luteinising hormone; LHRH; hypothalamic; antiovaratory; tumours;

KW antineoplastic; precocious puberty; ovulation; contraceptive.

OS Synthetic.

FH Key Location/Qualifiers

PT Misc\_difference 1

FT /label- pgiu

FT Modified\_site 10

FT /note= "amidated"

PN WO9213883-A.

PD 20-AUG-1992.

PF 29-JAN-1992; U00776.

PR 30-JAN-1991; US-647786.

PA (TULANE) TULANE EDUCATIONAL FUND.

PI Janaky T, Juhasz A, Schally AV;

DR MPI; 92-299984/36.

PT New deca-peptide luteinising hormone-releasing hormone

PT antagonists - for treating precocious puberty, hormone dependent

PT tumours, endometritis, cystic diseases; also as contraceptive

PS Disclosure; Page 1; 43pp; English.

CC The decapeptides is an antagonistic analogue of hypothalamic LHRH

CC which possesses high antiovaratory and antineoplastic activity, is

CC free of anaphylactoid side effects and is believed to be free of

CC endometrogenic effects. The peptide may be used to treat precocious

CC puberty, hormone dependent tumours, e.g. malignant and benign

CC prostate tumours, e.g. secondary amenorrhoea, endometriosis and

CC ovarian and mammary cystic diseases. The peptide is also useful

CC for regulating ovulation e.g. as preovital or postovital

CC contraceptives, for synchronising oestrus in livestock and for

CC improving the "rhythm" method. It is also useful for regulating

CC the human menopausal gonadotropin, follicle stimulating and LH levels

CC during premenopausal and postmenopausal periods. As it suppresses

CC the spermatogenesis and testosterone levels in males, it may be of

CC potential use for male contraception.

CC See also R26818, R29046-7.

SQ Sequence 10 AA;

SQ 0 A; 1 R; 0 N; 0 D; 0 B; 0 C; 0 Q; 1 E; 0 Z; 2 G; 1 H;

SQ 0 I; 1 L; 0 K; 0 M; 0 F; 1 P; 1 S; 0 T; 1 W; 1 Y; 0 V;

Initial Score = 10 Optimized Score = 10 Significance = 7.42

Residue Identity = 100% Matches = 10 Mismatches = 0

Gaps = 0 Conservative Substitutions = 0

X X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10

6. US-08-480-494A-1 (1-10)  
P10416 Luteinising Hormone Releasing Hormone analogue #5.

ID P10416 standard; peptide; 10 AA.

AC P10416;

DT 17-DEC-1992 (first entry)

DE Luteinising Hormone Releasing Hormone analogue #5.

KW LHRH; Follicle Stimulating Factor; FSH; acne; hirsutism;

KW dysmenorrhea; precocious puberty; endometriosis; prostate cancer;

KW benign prostate hypertrophy; mammary tumour.

FH Key Location/Qualifiers

FT Modified\_site 1

FT /label- OTHER

FT /note= "pyroglutamic acid"

FT Modified\_site 7

FT /label- OTHER

FT /note= "N-alpha-methyl-Leu"

FT Modified\_site 10

FT /note= "amidated or absent, in which case Pro(9)"

FT 1s Pro-NH-C2H5"

PN BE-885308-A.

PD 19-MAR-1981.

PF 23-FEB-1985; 468932.

PR 21-SEP-1979; FR-023545.

PA (ROUS) ROUSSEL UCLAF.

DR MPI; 81-23409D/14 (23409D).

PT LH-RH, liberating factor for LH and FSH, and its agonists compn.

PT - used to treat prostate adenocarcinoma, benign hypertrophy of

PT the prostate, hirsutism, acne, etc.

PS Claim 1(f); Page 16; 27pp; French.  
CC A composition is claimed containing LHRH or its analogues. The  
CC composition is used to treat prostate adenocarcinoma, benign  
CC hypertrophy of the prostate, endometriosis, dysmenorrhea, hirsutism,  
CC hormone-dependent mammary tumours, for treatment or prevention of  
CC precocious puberty, delaying the onset of puberty and for treating  
CC acne. The compositions may also contain antiandrogens.  
CC See P10411-P10418.  
SQ Sequence 10 AA;  
SQ 0 A; 1 R; 0 N; 0 D; 0 B; 0 C; 0 Q; 1 E; 0 Z; 2 G; 1 H;  
SQ 0 I; 1 L; 0 K; 0 M; 0 F; 1 P; 1 S; 0 T; 1 W; 1 Y; 0 V;  
Initial Score = 10 Optimized Score = 10 Significance = 7.42  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10  
7. US-08-480-494A-1 (1-10)  
P10411 Luteinising Hormone Releasing Hormone.

ID P10411 standard; peptide; 10 AA.  
AC P10411;  
DE Luteinising Hormone Releasing Hormone.  
KW LHRH; Follicle Stimulating Factor; FSH; acne; hirsutism;  
KW dysmenorrhea; precocious puberty; endometriosis; prostate cancer;  
KW benign prostate hypertrophy; mammary tumour.  
FH Key Location/Qualifiers  
FT Modified site 1  
FT /label= OTHER  
FT /note= "pyroglutamic acid"  
FT Modified site 10  
FT /note= "amidated"  
PN BE-885308-A.  
PD 19-MAR-1981.  
PE 23-FEB-1983; 468932.  
PR 21-SEP-1979; FR-023545.  
PR (ROUS ) ROUSSEL UCLAF.  
PA WPI; 81-23409D/14 (23409D).  
PT LH-RH, liberating factor for LH and FSH, and its agonists compsn.  
PT LH-RH, liberating factor for LH and FSH, and its agonists compsn.  
PT - used to treat prostate adenocarcinoma, benign hypertrophy of  
PT the prostate, hirsutism, acne, etc.  
PS Claim 1(a); Page 15; 27pp; French.  
CC A composition is claimed containing LHRH or its analogues. The  
CC composition is used to treat prostate adenocarcinoma, benign  
CC hypertrophy of the prostate, endometriosis, dysmenorrhea, hirsutism,  
CC hormone-dependent mammary tumours, for treatment or prevention of  
CC precocious puberty, delaying the onset of puberty and for treating  
CC acne. The compositions may also contain antiandrogens.  
CC See also P10412-P10418.  
SQ Sequence 10 AA;  
SQ 0 A; 1 R; 0 N; 0 D; 0 B; 0 C; 0 Q; 1 E; 0 Z; 2 G; 1 H;  
SQ 0 I; 1 L; 0 K; 0 M; 0 F; 1 P; 1 S; 0 T; 1 W; 1 Y; 0 V;  
Initial Score = 10 Optimized Score = 10 Significance = 7.42  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10  
8. US-08-480-494A-1 (1-10)  
P50222 Gonadotrophin release stimulating hormone.

ID P50222 standard; Protein; 10 AA.  
AC P50222;  
DE 20-JAN-1992 (first entry)  
DE Gonadotrophin release stimulating hormone.  
KW GnRH; LH-RH; LRF; gonadotrophins; steroids; contraceptive.  
OS Synthetic.  
PN EP-143573-A.  
PD 05-JUN-1985.  
PE 05-NOV-1984; 307625.  
PR 29-NOV-1983; US-556148.  
PR 30-APR-1983; US-771317.  
PA (SALK ) SALK INST FOR BIOL STUD.  
PI Roeske RW, Rivier JE, Vale WW;  
DR WPI; 85-136434/23.  
PT New GnRH antagonist peptide(s) - useful as inhibitors of  
PT gonadotropin(s) and/or steroid(s) for contraceptive use.  
PS Disclosure; Page 1; 20pp; English.  
CC The claimed peptide antagonists inhibit the release of gonadotrophins  
CC and/or steroids. They are antagonistic to GnRH, inhibit ovulation, and  
CC may cause resorption of a fertilised egg if administered shortly after  
CC absorption. The peptides also have utility in male contraception, and  
CC in treatment of precocious puberty, hormone dependent neoplasia,  
CC dysmenorrhea and endometriosis.  
SQ Sequence 10 AA;  
SQ 0 A; 1 R; 0 N; 0 D; 0 B; 0 C; 0 Q; 1 E; 0 Z; 2 G; 1 H;  
SQ 0 I; 1 L; 0 K; 0 M; 0 F; 1 P; 1 S; 0 T; 1 W; 1 Y; 0 V;  
Initial Score = 10 Optimized Score = 10 Significance = 7.42  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10  
9. US-08-480-494A-1 (1-10)  
R15713 Peptide #1 with homology to LHRH.

ID R15713 standard; Protein; 10 AA.  
AC R15713;  
DE 24-JAN-1992 (first entry)  
DE Peptide #1 with homology to LHRH.  
KW Luliberin.  
OS Synthetic.  
FH Key Location/Qualifiers  
FT Modified site 1  
FT /label= OTHER  
FT /note= "pyroglu"  
FT Modified site 9  
FT /label= Hyp  
FT Modified site 10  
FT /label= OTHER  
FT /note= "amidated"  
PN WO9116343-A.  
PD 31-OCT-1991.  
PE 22-APR-1991; F00332.  
PR 23-APR-1990; FR-005147.  
PR (INRM ) INSERM INST NAT SANTE.  
PI Gautron J, Patou E, Kordon C, Bauer K;  
DR WPI; 91-339753/46  
PT New peptide homologous with luteinising hormone-releasing hormone  
PT - used to treat gynaecological conditions, cancer of gonads and  
PT sec. sexual organs, psychiatric conditions and in assays  
PS Claim 3; Page 50; 83pp; French.  
CC The C-terminal residue (Gly-CO-NH2) can be replaced by ethylamide.  
CC This peptide and fragments of it (i.e. amino acids 4-10, 5-10, 6-10  
CC and 7-10) are agonists and antagonists of LHRH. They are useful for  
CC treating e.g. precocious or delayed puberty, psychiatric disorders  
CC esp. those of the libido or sexual aggression, etc. In addition they

CC are useful for functional exploration of the hypothalamus-hypophyseal  
 CC axis and for radioimmunological or biological assay (of LH, FSH and  
 CC steroid levels) in biological fluids and biopsy samples.

CC Sequence 10 AA:  
 SQ 0 A: 1 R: 0 N: 0 D: 0 B: 0 C: 0 Q: 1 E: 0 Z: 2 G: 1 H:  
 SQ 0 I: 1 L: 0 K: 0 M: 0 F: 1 P: 1 S: 0 T: 1 W: 1 Y: 0 V:

Initial Score = 10 Optimized Score = 10 Significance = 7.42  
 Residue Identity = 100% Matches = 10 Mismatches = 0  
 Gaps = 0 Conservative Substitutions = 0

X  
 EHWSYGLRPG  
 |||||  
 EHWSYGLRPG  
 X 10

10. US-08-480-494A-1 (1-10)  
 P60576 Novel decapeptide with LHRH inhibition activity.

ID P60576 standard; Protein; 10 AA.

DT 27-OCT-1991 (first entry)  
 DE Novel decapeptide with LHRH inhibition activity.  
 KW Luteinizing hormone releasing hormone activity.

OS Synthetic.  
 PN J61210098-A.

PD 18-SEP-1986  
 PR 23-AUG-1985; 185616.  
 PR 23-AUG-1984; US-643643.

PA (TULA-) ADMIN TULANE EDUCAT.  
 PA (TULA-) TULANE E FUND ADMINISTRA.

PT Decapeptide - inhibits LH-RH hormone release activity.

PS Disclosure: Page 990; 5pp; Japanese.  
 CC Peptide inhibits the release of luteinizing hormone releasing hormone.

CC See also P60575.

SQ Sequence 10 AA:  
 SQ 0 A: 1 R: 0 N: 0 D: 0 B: 0 C: 0 Q: 1 E: 0 Z: 2 G: 1 H:  
 SQ 0 I: 1 L: 0 K: 0 M: 0 F: 1 P: 1 S: 0 T: 1 W: 1 Y: 0 V:

Initial Score = 10 Optimized Score = 10 Significance = 7.42  
 Residue Identity = 100% Matches = 10 Mismatches = 0  
 Gaps = 0 Conservative Substitutions = 0

X  
 EHWSYGLRPG  
 |||||  
 EHWSYGLRPG  
 X 10

11. US-08-480-494A-1 (1-10)  
 P61403 Gonadotropin releasing hormone.

ID P61403 standard; Protein; 10 AA.

DT 04-AUG-1991 (first entry)

DE Gonadotropin releasing hormone.  
 KW Gonadotropin releasing hormone; analogue; peptide synthesis;  
 KW ovulation; veterinary medicine; fertility.

PN DD-232500-A.

PD 29-JAN-1986.  
 PR 08-MAY-1984; 262804.

PA (DEAK) AKAD WISSENSCHAFT DDR.  
 PI Kaufmann KD, Dolling R, Handel L;

DR WPI: 86-137868/22.

PT Prepn. of gonadotropin liberating hormone and analogues - by  
 PT multistage rapid peptide synthesis in soln. without isolating  
 PT intermediates

PS Disclosure: page 7; 8pp; german.

CC The gonadotropin releasing hormone and its analogues are prepd. by a  
 CC new multistage rapid peptide synthesis method in soln., where the  
 CC intermediates are not isolated. The process is rapid and gives very  
 CC pure peptide quickly and using little equipment. The peptide can be  
 CC used in veterinary medicine to synchronise ovulation in large animal  
 CC herds, and in human medicine in the treatment of fertility disorders.

SQ Sequence 10 AA:  
 SQ 0 A: 1 R: 0 N: 0 D: 0 B: 0 C: 0 Q: 1 E: 0 Z: 2 G: 1 H:  
 SQ 0 I: 1 L: 0 K: 0 M: 0 F: 1 P: 1 S: 0 T: 1 W: 1 Y: 0 V:

Initial Score = 10 Optimized Score = 10 Significance = 7.42  
 Residue Identity = 100% Matches = 10 Mismatches = 0  
 Gaps = 0 Conservative Substitutions = 0

X  
 EHWSYGLRPG  
 |||||  
 EHWSYGLRPG  
 X 10

12. US-08-480-494A-1 (1-10)  
 P90630 Sequence of luteinizing hormone releasing hormone

ID P90630 standard; Protein; 10 AA.

DT 14-JUN-1989 (first entry)

DE Sequence of luteinizing hormone releasing hormone (LHRH).  
 KW Luteinizing hormone releasing hormone (LHRH); LHRH antagonist;  
 KW 19-nor-progestational agent; female gynaecological disorders.

PN EP-301850-A.

PD 01-FEB-1989  
 PR 28-JUL-1988; 306947.

PR 31-JUL-1987; US-080518.  
 PA (SYNT) Syntex (USA) Inc.

PI Vickery BH  
 DR WPI: 89-033720/05.

PT Compn. comprising LHRH-antagonist and 19-nor-progestational agent -  
 PT for treating female gynaecological disorders based on gonads  
 PT steroid product.

PS Disclosure: Page 2; 31pp; English.

CC Analogues (I) of the sequence pref. have amino acid (AA) substitutions at  
 CC posns. 2 (his is replaced by a D-AA) and 6 (gly is replaced by a D-AA).

CC A therapeutically effective amt. of such an antagonist is contained in a  
 CC pharmaceutical compn. alongside a menopausal-symptom-alleviating amt. of  
 CC a 19-nor-progestational agent (II) (pref. both in single formulation).

CC The compn. is pref. administered nasally in dosages of 0.01-1 mg/kg/day  
 CC for (I) and 0.02-0.07 mg/kg/day for (II). May be used for inhibition of  
 CC ovarian disease, and treatment of eg endometriosis, breast cancer, polycystic

CC ovarian disease, or precocious puberty in female mammals.

SQ Sequence 10 AA:  
 SQ 0 A: 1 R: 0 N: 0 D: 0 B: 0 C: 0 Q: 1 E: 0 Z: 2 G: 1 H:  
 SQ 0 I: 1 L: 0 K: 0 M: 0 F: 1 P: 1 S: 0 T: 1 W: 1 Y: 0 V:

Initial Score = 10 Optimized Score = 10 Significance = 7.42  
 Residue Identity = 100% Matches = 10 Mismatches = 0  
 Gaps = 0 Conservative Substitutions = 0

X  
 EHWSYGLRPG  
 |||||  
 EHWSYGLRPG  
 X 10

13. US-08-480-494A-1 (1-10)  
 P70922 Luteinizing hormone releasing hormone agonist.

ID P70922 standard; Peptide; 10 AA.

DT 01-MAY-1991 (first entry)

DE Luteinizing hormone releasing hormone agonist.  
 KW LHRH; contraception; precocious puberty; endometriosis;

KW breast tumours; prostate tumours; ectopic tumours; menopause.  
 OS synthetic.  
 FH Key: Location/Qualifiers  
 FT Modified-site 10.10  
 FT /label= other  
 FT /note= "other= ketomethylene(Gly), dihydroketo-  
 FT methylene(Gly)"  
 FT Modified-site 1.1  
 FT /label= other  
 FT /note= "other= pyroglutamic acid"  
 PN US4705778-A.  
 PD 10-NOV-1987.  
 PR 22-OCT-1985; 790031.  
 PR 22-OCT-1985; US-790031.  
 PA (STRI ) SRI INTERNATIONAL.  
 PI Almqvist RG, Olsen CM.  
 DR WPI: 87-334627/47.  
 PT Orally active luteinising hormone-releasing hormone peptide  
 PT analogues - have keto:methylene or hydroxy:ethylene in place of  
 PT amide between proline(9) and glycine(10)  
 PS Disclosure: page 4; 17pp; English.  
 CC This luteinising hormone-releasing hormone (LHRH) agonist has  
 CC either a ketomethylene or dihydroketomethylene gp. replacing the  
 CC amide linkage between residues 9 and 10 in LHRH. This results in  
 CC an increase in oral activity. It is useful for eg male and  
 CC female contraception, treatment of precocious puberty and endo-  
 CC metrosis and treatment of breast- and prostate tumours.  
 CC See also P70923-27.  
 SQ Sequence 10 AA; 0 D; 0 B; 0 C; 0 Q; 1 E; 0 Z; 2 G; 1 H;  
 SQ 0 A; 1 R; 0 N; 0 M; 0 F; 1 P; 1 S; 0 T; 1 W; 1 Y; 0 V;  
 SQ 0 I; 1 L; 0 K; 0 J; 0 M; 0 F; 1 P; 1 S; 0 T; 1 W; 1 Y; 0 V;  
 Initial Score = 10 Optimized Score = 10 Significance = 7.42  
 Residue Identity = 100% Matches = 10 Mismatches = 0  
 Gaps = 0 Conservative Substitutions = 0

X X  
 EHMSGCLRPG  
 |||||||||  
 EHMSGCLRPG  
 X 10

14. US-08-480-494A-1 (1-10)  
 P60127 Gonadoliberin antagonist.  
 ID P60127 standard; Peptide: 10 AA.  
 AC P60127;  
 DT 12-JUN-1991 (first entry)  
 DE Gonadoliberin antagonist.  
 KW Gonadoliberin antagonist; contraceptive; antitumor.  
 PN EP-201260-A.  
 PD 12-NOV-1986.  
 PR 28-APR-1986; 303210.  
 PR 09-MAY-1985; US-732531.  
 PA (SALK ) SALK INST FOR BIOL STUD.  
 PI Rivier JEF, Varga JI, Hagler AR, Strubers RS, Perrin MH;  
 PI Rivier CL, Vale MW.  
 DR WPI: 86-299774/46.  
 PT New peptide gonadotropin releasing hormone antagonists - useful  
 PT esp. as contraceptives, for treating early puberty,  
 PT hormone-dependent neoplasms etc.  
 PS Disclosure: Page 1; 33pp; English.  
 CC The decapeptide encodes a gonadoliberin antagonist, which may be  
 CC used as a male contraceptive and as an antitumor (against steroid-  
 CC dependent tumours).  
 SQ Sequence 10 AA;  
 SQ 0 A; 1 R; 0 N; 0 D; 0 B; 0 C; 0 Q; 1 E; 0 Z; 2 G; 1 H;  
 SQ 0 I; 1 L; 0 K; 0 J; 0 M; 0 F; 1 P; 1 S; 0 T; 1 W; 1 Y; 0 V;  
 Initial Score = 10 Optimized Score = 10 Significance = 7.42  
 Residue Identity = 100% Matches = 10 Mismatches = 0  
 Gaps = 0 Conservative Substitutions = 0

15. US-08-480-494A-1 (1-10)  
 R11187 Plasmid pBTR859-encoded TrarP-multiple LHRH analog  
 ID R1187 standard; Protein: 323 AA.  
 AC R1187;  
 DT 22-MAY-1991 (first entry)  
 DE Plasmid pBTR859-encoded TrarP-multiple LHRH analogue fusion.  
 KW TrarP protein; luteinizing hormone releasing hormone; fusion protein;  
 KW immunological castration.  
 FH Key  
 FT Peptide 1..20  
 FT /label= TrarP signal  
 FT Peptide 201..280  
 FT /label= 8 LHRH analogues in tandem repeat  
 PN M09102799-A.  
 PD 07-MAR-1991.  
 PR 24-AUG-1990; AU0373.  
 PR 25-AUG-1989; AU-005979.  
 PA (BIOR-) BIOTECHN AUST PRY L.  
 PI Russell-Jones CJ, Stewart AG, Tsonis CG;  
 DR WPI: 91-087282/12.  
 DR N-PSDB: Q11021.  
 PT Fusion proteins comprising LHRH analogue and TrarP (analogue) -  
 PT useful in vaccine for inhibition or control of reproduction in  
 PT vertebrates, esp. domestic animals  
 PS Example 1; Fig 2 and 5; 53pp; English.  
 CC Plasmid pBTR859 is a TrarP-LHRH analogue fusion in which 8 copies  
 CC of an LHRH analogue have been inserted between amino acids 200 and  
 CC 201 of TrarP (Ogata R.T. et al., (1982) J.Bacteriol. 151:819-827).  
 CC The plasmid was constructed by two successive additions of DNA  
 CC coding for a dimer of LHRH analogue into the SmaI site of pBTR862  
 CC (see Q11020) which all ready carries four copies of the LHRH  
 CC sequence. After transformation, colonies with 8 LHRH molecules were  
 CC identified. Fusion proteins with multiple inserts generated a higher  
 CC anti-LHRH response (as measured by the binding of (125)I-LHRH at a  
 CC serum dilution of 1:2000 final) than constructs with a single  
 CC insert, in outbred mice and dogs. The fusion proteins can be used to  
 CC inhibit reproductive functions in vertebrates.  
 CC See also Q10995, Q10997-Q11000, Q11014-Q11020.  
 SQ Sequence 323 AA;  
 SQ 32 A; 14 R; 12 N; 11 D; 0 B; 1 C; 12 Q; 20 E; 0 Z; 36 G; 9 H;  
 SQ 11 I; 29 L; 21 K; 11 M; 2 F; 12 P; 24 S; 21 T; 10 W; 15 Y; 20 V;  
 Initial Score = 10 Optimized Score = 10 Significance = 7.42  
 Residue Identity = 100% Matches = 10 Mismatches = 0  
 Gaps = 0 Conservative Substitutions = 0

X X  
 EHMSGCLRPG  
 |||||||||  
 EHMSGCLRPG  
 X 240



APPLICANT:  
TITLE OF INVENTION: Nucleic Acid Encoding [His-5,Tyr-7,Tyr-8]-  
TITLE OF INVENTION: GnRH Preprohormone and [Ser-8]-GnRH preprohormone and  
TITLE OF INVENTION: Their Uses  
NUMBER OF SEQUENCES: 31  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/12763  
FILING DATE:  
CLASSIFICATION:  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/147,771  
FILING DATE: 05-NOV-1993  
ATTORNEY/AGENT INFORMATION:  
NAME: Weber, Kenneth A.  
REGISTRATION NUMBER: 31,677  
REFERENCE/DOCKET NUMBER: 14210-000400PC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (415) 543-9600  
TELEFAX: (415) 543-5043  
INFORMATION FOR SEQ ID NO: 4:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 10 amino acids  
TYPE: amino acid  
TOPOLOGY: unknown  
MOLECULE TYPE: protein  
ORIGINAL SOURCE:  
ORGANISM: Mammal  
FEATURE:  
NAME/KEY: Peptide  
LOCATION: 1..10  
OTHER INFORMATION: /note="GnRH"

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X  
10

2. US-08-480-494A-1 (1-10)  
PCT-US94-04832A- Sequence 1, Application PC/TUS9404832A

Sequence 1, Application PC/TUS9404832A  
GENERAL INFORMATION:  
APPLICANT: Ladd, Anna  
APPLICANT: Wang, Chang YI  
APPLICANT: Zamb, Timothy  
TITLE OF INVENTION: Immunogenic LHRH peptide constructs  
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines  
NUMBER OF SEQUENCES: 114  
CORRESPONDENCE ADDRESS:  
ADDRESS:  
STREET: 400 Garden City Plaza  
CITY: Garden City  
STATE: NY  
COUNTRY: US  
ZIP: 11530  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: PCT/US94/04832A

FILING DATE: 13-APR-1994  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME:  
REGISTRATION NUMBER:  
REFERENCE/DOCKET NUMBER:  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (516)742-4343  
TELEFAX: (516)742-4366  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 10 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X  
10

3. US-08-480-494A-1 (1-10)  
US-07-672-300A-1 Sequence 14, Application US/07672300A

Sequence 14, Application US/07672300A  
GENERAL INFORMATION:  
APPLICANT: Dr. Romano Deghenghi  
TITLE OF INVENTION: BIOLOGICALLY ACTIVE PEPTIDES  
TITLE OF INVENTION: CONTAINING D-2-ALKYLTRYPTOPHAN  
NUMBER OF SEQUENCES: 14  
CORRESPONDENCE ADDRESS:  
ADDRESS:  
STREET: 1155 Avenue of the Americas  
CITY: New York  
STATE: New York  
COUNTRY: USA  
ZIP: 10036  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette 3.5"  
COMPUTER: Hewlett Packard (IBM PC Compatible)  
OPERATING SYSTEM: MS-DOS  
SOFTWARE: Wordperfect 5.1  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/672,300A  
FILING DATE: 19910320  
CLASSIFICATION: 530  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: Harry C. Jones III  
REGISTRATION NUMBER: 20,280  
REFERENCE/DOCKET NUMBER: 7264-004  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (212)-790-9090  
INFORMATION FOR SEQ ID NO: 14:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 10  
TYPE: AMINO ACID  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: Peptide  
HYPOTHETICAL: yes

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

4.  
X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10

4. US-08-480-494A-1 (1-10)  
US-07-669-695-1 Sequence 1, Application US/07669695

Sequence 1, Application US/07669695

GENERAL INFORMATION:

APPLICANT: Hoeger, Carl A  
APPLICANT: Rivier, Jean E F  
APPLICANT: Theobald, Paula G  
APPLICANT: Porter, John S  
APPLICANT: Rivier, Catherine L  
APPLICANT: Vale Jr, Wylie W  
TITLE OF INVENTION: GnRH Analogs  
NUMBER OF SEQUENCES: 1  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fitch, Even, Tabin & Flannery  
STREET: 135 South LaSalle Street, Suite 900  
CITY: Chicago  
STATE: Illinois  
COUNTRY: United States  
ZIP: 60603-4277

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/669,695  
FILING DATE: 19910425  
CLASSIFICATION: 530

ATTORNEY/AGENT INFORMATION:

NAME: Schumann, James J  
REGISTRATION NUMBER: 20,856  
REFERENCE/DOCKET NUMBER: 51142  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)552-1311  
TELEFAX: (619)552-0095

INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids  
TYPE: AMINO ACID

TOPOLOGY: unknown  
MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10

5. US-08-480-494A-1 (1-10)  
US-07-728-782-1 Sequence 1, Application US/07728782

Sequence 1, Application US/07728782

GENERAL INFORMATION:

APPLICANT: Sherwood, Nancy  
APPLICANT: Lovejoy, David  
APPLICANT: Ngamwongchon, Som Sri  
APPLICANT: Fischer, Wolfgang H  
APPLICANT: Rivier, Jean E F  
TITLE OF INVENTION: GnRH Analogs

NUMBER OF SEQUENCES: 4  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Fitch, Even, Tabin & Flannery  
STREET: 135 South LaSalle Street, Suite 900  
CITY: Chicago  
STATE: Illinois  
COUNTRY: USA  
ZIP: 60603

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/728,782  
FILING DATE: 19910703

CLASSIFICATION: 530

ATTORNEY/AGENT INFORMATION:

NAME: Schumann, James J  
REGISTRATION NUMBER: 20856  
REFERENCE/DOCKET NUMBER: 51347  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (619)552-1311  
TELEFAX: (619)552-0095  
TELEX: 20 6566 PATLAW CGO

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids  
TYPE: AMINO ACID

TOPOLOGY: unknown  
MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10

6. US-08-480-494A-1 (1-10)  
US-07-728-782A-1 Sequence 1, Application US/07728782A

Sequence 1, Application US/07728782A

GENERAL INFORMATION:

APPLICANT: Sherwood, Nancy  
APPLICANT: Lovejoy, David  
APPLICANT: Ngamwongchon, Som Sri  
APPLICANT: Fischer, Wolfgang H.  
APPLICANT: Rivier, Jean E. F.  
TITLE OF INVENTION: GnRH ANALOGS  
NUMBER OF SEQUENCES: 7

CORRESPONDENCE ADDRESS:

ADDRESSEE: Fitch, Even, Tabin & Flannery  
STREET: 135 South LaSalle Street, Suite 900  
CITY: Chicago  
STATE: Illinois  
COUNTRY: USA  
ZIP: 60603

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/728,782A  
FILING DATE: 19910703

CLASSIFICATION: 514

PRIOR APPLICATION DATA:

APPLICATION NUMBER:

FILING DATE:  
ATTORNEY/AGENT INFORMATION:

NAME: Schumann, James J.  
REGISTRATION NUMBER: 20,856  
REFERENCE/DOCKET NUMBER: 51347  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 619-552-1311  
TELEFAX: 619-552-0095

TELEX: 20 6566 PATLAW CGO  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: AMINO ACID

STRANDEDNESS: single

TOPOLOGY: unknown

MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10

7. US-08-480-494A-1 (1-10)  
US-07-761-849-1 Sequence 1, Application US/07761849

Sequence 1, Application US/07761849  
GENERAL INFORMATION:

APPLICANT: Melsing, Robert H.

ATTORNEY/AGENT INFORMATION:

NAME: Crane-Feury, Sharon E

REGISTRATION NUMBER: 36,113

REFERENCE/DOCKET NUMBER: 028724-055

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703) 836-6620

TELEFAX: (703) 836-2021

INFORMATION FOR SEQ ID NO: 22:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

FEATURE:

NAME/KEY: Modified-site

LOCATION: 1

OTHER INFORMATION: /note= "Position 1 - p-Glu."

NAME/KEY: Modified-site

LOCATION: 10

OTHER INFORMATION: /note= "Position 10 - Gly-NH2."

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10

TELEX: 20 6566 PATLAW CGO  
INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: AMINO ACID

STRANDEDNESS: single

TOPOLOGY: unknown

MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10

8. US-08-480-494A-1 (1-10)  
US-07-946-062-22 Sequence 22, Application US/07946062

Sequence 22, Application US/07946062  
GENERAL INFORMATION:

APPLICANT: BODOR, Nicholas

TITLE OF INVENTION: BRAIN-ENHANCED DELIVERY OF NEUROACTIVE

TITLE OF INVENTION: PEPTIDES BY SEQUENTIAL METABOLISM

NUMBER OF SEQUENCES: 107

CORRESPONDENCE ADDRESS:

ADDRESS: Burns, Doane, Swecker & Mathis

STREET: George Mason Bldg., Washington & Prince Sts.

CITY: Alexandria

STATE: Virginia

COUNTRY: United States

ZIP: 22313-1404

COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/946,062

FILING DATE: 17-SEP-1992

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: Crane-Feury, Sharon E

REGISTRATION NUMBER: 36,113

REFERENCE/DOCKET NUMBER: 028724-055

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703) 836-6620

TELEFAX: (703) 836-2021

INFORMATION FOR SEQ ID NO: 22:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

FEATURE:

NAME/KEY: Modified-site

LOCATION: 1

OTHER INFORMATION: /note= "Position 1 - p-Glu."

NAME/KEY: Modified-site

LOCATION: 10

OTHER INFORMATION: /note= "Position 10 - Gly-NH2."

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10

9. US-08-480-494A-1 (1-10)  
US-08-020-985-9 Sequence 9, Application US/08020985

Sequence 9, Application US/08020985  
GENERAL INFORMATION:

APPLICANT: Almqvist, Ronald G.

ATTORNEY/AGENT INFORMATION:

NAME: Reed, Dianne E.

REGISTRATION NUMBER: 31,292

REFERENCE/DOCKET NUMBER: 8500-0135.01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 415-617-8999

TELEFAX: 415-327-3231

TELEX:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: AMINO ACID

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.63

Residue Identity = 100% Matches = 10 Mismatches = 0

Gaps = 0 Conservative Substitutions = 0

X X

EHMSYGLRPG

|||||

EHMSYGLRPG

X 10

TELEFAX: 415-327-3231

TELEX:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.63

Residue Identity = 100% Matches = 10 Mismatches = 0

Gaps = 0 Conservative Substitutions = 0

X X

EHMSYGLRPG

|||||

EHMSYGLRPG

X 10

TELEFAX: 415-327-3231

TELEX:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.63

Residue Identity = 100% Matches = 10 Mismatches = 0

Gaps = 0 Conservative Substitutions = 0

X X

EHMSYGLRPG

|||||

EHMSYGLRPG

X 10

TELEFAX: 415-327-3231

TELEX:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.63

Residue Identity = 100% Matches = 10 Mismatches = 0

Gaps = 0 Conservative Substitutions = 0

X X

EHMSYGLRPG

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: Reed, Dianne E.

REGISTRATION NUMBER: 31,292

REFERENCE/DOCKET NUMBER: 8500-0135.01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 415-617-8999

TELEFAX: 415-327-3231

TELEX:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: AMINO ACID

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.63

Residue Identity = 100% Matches = 10 Mismatches = 0

Gaps = 0 Conservative Substitutions = 0

X X

EHMSYGLRPG

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EHMSYGLRPG

X 10

TELEFAX: 415-327-3231

TELEX:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.63

Residue Identity = 100% Matches = 10 Mismatches = 0

Gaps = 0 Conservative Substitutions = 0

X X

EHMSYGLRPG

|||||

EHMSYGLRPG

X 10

TELEFAX: 415-327-3231

TELEX:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.63

Residue Identity = 100% Matches = 10 Mismatches = 0

Gaps = 0 Conservative Substitutions = 0

X X

EHMSYGLRPG

|||||

EHMSYGLRPG

X 10

TELEFAX: 415-327-3231

TELEX:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.63

Residue Identity = 100% Matches = 10 Mismatches = 0

Gaps = 0 Conservative Substitutions = 0

X X

EHMSYGLRPG

|||||

X  
X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X  
10

## 12. US-08-480-494A-1 (1-10)

US-08-147-771-4 Sequence 4, Application US/08147771

Sequence 4, Application US/08147771

GENERAL INFORMATION:

APPLICANT: Fernald, Russell D.

APPLICANT: Adelman, John P.

TITLE OF INVENTION: DNA Encoding (His-5,Trp-7,Tyr-8)-GnRH

TITLE OF INVENTION: Preprohormone and its Uses

NUMBER OF SEQUENCES: 16

CORRESPONDENCE ADDRESS:

ADDRESS: Townsend and Townsend Kourie and Crew

STREET: Steuart Street Tower, One Market Plaza

CITY: San Francisco

STATE: California

COUNTRY: US

ZIP: 94105-1493

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/147,771

FILING DATE: 05-NOV-1993

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Kruse, Norman J.

REGISTRATION NUMBER: 35,235

REFERENCE/DOCKET NUMBER: 5490A-217

TELECOMMUNICATION INFORMATION:

TELEPHONE: (415) 543-9600

TELEFAX: (415) 543-5043

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

TOPOLOGY: unknown

MOLECULE TYPE: protein

ORIGINAL SOURCE:

ORGANISM: Mammal

FEATURE:

NAME/KEY: Peptide

LOCATION: 1..10

OTHER INFORMATION: /note="GnRH"

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X  
10

## 13. US-08-480-494A-1 (1-10)

US-08-160-882-32 Sequence 32, Application US/08160882

Sequence 32, Application US/08160882

GENERAL INFORMATION:

APPLICANT: Russell-Jones, Gregory J.

APPLICANT: Stewart, Andrew G.

APPLICANT: Tsonis, Con G.

TITLE OF INVENTION: Trp/Neuropeptide-Y Fusion Proteins

NUMBER OF SEQUENCES: 55  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W., Suite 500  
CITY: Washington, D.C.  
COUNTRY: USA  
ZIP: 20007-5109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/160,882

FILING DATE: 03-DEC-1993

CLASSIFICATION: 514

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/690,983

FILING DATE: 25-JUN-1991

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/AU90/00373

FILING DATE: 24-AUG-1990

PRIOR APPLICATION DATA:

APPLICATION NUMBER: AU PJ 5979

FILING DATE: 25-AUG-1989

ATTORNEY/AGENT INFORMATION:

NAME: BENT, Stephen A.

REGISTRATION NUMBER: 29,768

REFERENCE/DOCKET NUMBER: 60042/119/BIAN

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202)672-5300

TELEFAX: (202)672-5399

TELEX: 904136

INFORMATION FOR SEQ ID NO: 32:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X  
10

## 14. US-08-480-494A-1 (1-10)

US-08-160-882-2 Sequence 2, Application US/08160882

Sequence 2, Application US/08160882

GENERAL INFORMATION:

APPLICANT: Russell-Jones, Gregory J.

APPLICANT: Stewart, Andrew G.

APPLICANT: Tsonis, Con G.

TITLE OF INVENTION: Trp/Neuropeptide-Y Fusion Proteins

NUMBER OF SEQUENCES: 55

CORRESPONDENCE ADDRESS:

ADDRESSEE: Foley &amp; Lardner

STREET: 3000 K Street, N.W., Suite 500

CITY: Washington, D.C.

COUNTRY: USA

ZIP: 20007-5109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/160,882  
FILING DATE: 03-DEC-1993  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/690,983  
FILING DATE: 25-JUN-1991  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/A090/00373  
FILING DATE: 24-AUG-1990  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: AU PJ 5979  
FILING DATE: 25-AUG-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768  
REFERENCE/DOCKET NUMBER: 60042/119/BIAU  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300  
TELEFAX: (202)672-5399  
TELEX: 904136  
INFORMATION FOR SEQ ID NO: 2:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 10 amino acids  
TYPE: amino acid  
TOPOLOGY: unknown  
MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X 10

15. US-08-480-494A-1 (1-10)  
US-08-229-275-1 Sequence 1. Application US/08229275

Sequence 1, Application US/08229275  
GENERAL INFORMATION:  
APPLICANT: Ladd, Anna  
APPLICANT: Wang, Chang YI  
APPLICANT: Zamb, Timothy  
TITLE OF INVENTION: Immunogenic LHRH peptide constructs as  
TITLE OF INVENTION: vaccines for treatment of prostate cancer and induction of  
TITLE OF INVENTION: infertility  
NUMBER OF INVENTIONS: 53  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: M. Lisa Wilson  
STREET: 25 Davids Drive  
CITY: Hauppauge  
STATE: NY  
COUNTRY: US  
ZIP: 11788  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/229,275  
FILING DATE: 13-APR-1994  
CLASSIFICATION: 424  
ATTORNEY/AGENT INFORMATION:  
NAME: Wilson, M L  
REGISTRATION NUMBER: 34,045  
REFERENCE/DOCKET NUMBER: 2003Z  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (516)273-2828  
TELEFAX: (516)273-1717

INFORMATION FOR SEQ ID NO: 1:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 10 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X 10

16. US-08-480-494A-1 (1-10)  
US-08-247-451-13 Sequence 13, Application US/08247451

Sequence 13, Application US/08247451  
GENERAL INFORMATION:  
APPLICANT: ANANTHANARAYANAN, V. S.  
TITLE OF INVENTION: PHARMACEUTICAL COMPOSITION AND METHOD  
TITLE OF INVENTION: FOR MEDIATING THE PHYSIOLOGICAL EFFECTS OF A COMPOUND  
NUMBER OF INVENTIONS: 25  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Browdy and Neimark  
STREET: 419 Seventh St., Suite 300  
CITY: Washington, N.W.  
STATE: D.C.  
COUNTRY: USA  
ZIP: 20004  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/247,451  
FILING DATE:  
CLASSIFICATION: 514  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/802,982  
FILING DATE: 06-DEC-1991  
APPLICATION NUMBER: US 07/323,421  
FILING DATE: 14-MAR-1989  
ATTORNEY/AGENT INFORMATION:  
NAME: Cooper, Iver P.  
REGISTRATION NUMBER: 28,005  
REFERENCE/DOCKET NUMBER: ANATHAN1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 202-628-5197  
TELEFAX: 202-37-3528  
TELEX: 248633  
INFORMATION FOR SEQ ID NO: 13:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 10 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
FEATURE:  
NAME/KEY: Modified-site  
LOCATION: 1  
OTHER INFORMATION: /note="Amino Acid 1 - pyroglu"

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X X  
EHWSYGLRPG

|||||  
EHMSYGLRPG  
X 10

17. US-08-480-494A-1 (1-10)  
US-08-341-219-11 Sequence 11, Application US/08341219

## Sequence 11, Application US/08341219

## GENERAL INFORMATION:

APPLICANT: Zohar, Y.  
APPLICANT: Rivier, J.  
APPLICANT: Powell, J.  
APPLICANT: Sherwood, N.  
APPLICANT: Gotthelf, Y.  
TITLE OF INVENTION: Compounds and Methods for Controlling  
TITLE OF INVENTION: Reproduction in Fish  
NUMBER OF SEQUENCES: 26  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Pennie & Edmonds  
STREET: 1155 Avenue of the Americas  
CITY: New York  
STATE: N.Y.  
COUNTRY: USA  
ZIP: 10036-2711

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/341,219  
FILING DATE: 05-DEC-1994  
CLASSIFICATION: 514  
ATTORNEY/AGENT INFORMATION:

NAME: Cornuzi, Laura A.  
REGISTRATION NUMBER: 30742  
REFERENCE/DOCKET NUMBER: 8399-003-999  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (212) 790-9090  
TELEFAX: (212) 869-8864/9741  
INFORMATION FOR SEQ ID NO: 11:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 10 amino acids  
TYPE: amino acid  
STRANDEDNESS: not relevant  
TOPOLOGY: unknown  
MOLECULE TYPE: peptide  
HYPOTHETICAL: NO  
ANTI-SENSE: NO

## FEATURE:

NAME/KEY: Modified-site  
LOCATION: 1  
OTHER INFORMATION: /product="OTHER"  
OTHER INFORMATION: /label= Glu1  
OTHER INFORMATION: /note="pyroglutamic acid"

## FEATURE:

NAME/KEY: Modified-site  
LOCATION: 10  
OTHER INFORMATION: /product="OTHER"  
OTHER INFORMATION: /label= Gly10  
OTHER INFORMATION: /note="amidated"

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10

18. US-08-480-494A-1 (1-10)  
US-08-453-588-22 Sequence 22, Application US/08453588

## Sequence 22, Application US/08453588

## GENERAL INFORMATION:

APPLICANT: Anna van der Zee, Irma Marianne van Die,  
APPLICANT: Willem Pieter Martin Hoekstra,  
APPLICANT: Josephus Theodorus Giesen.  
TITLE OF INVENTION: Carrier system against GnRH  
NUMBER OF SEQUENCES: 30  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Akzo Nobel Patent Department  
STREET: 1300 Piccard Drive, Suite 206  
CITY: Rockville  
STATE: Maryland  
COUNTRY: U.S.A.  
ZIP: 20850

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/453,588  
FILING DATE: 30-MAY-1995  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 08/078,661  
FILING DATE: 16-JUN-1993

## ATTORNEY/AGENT INFORMATION:

NAME: Mary E. Gormley  
REGISTRATION NUMBER: 34,409  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (301) 258-5200  
INFORMATION FOR SEQ ID NO: 22:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 10 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein

## FEATURE:

NAME/KEY: Glu at position 1 is pyroglutamic acid  
Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10

19. US-08-480-494A-1 (1-10)  
US-08-477-298-2 Sequence 2, Application US/08477298

## Sequence 2, Application US/08477298

## GENERAL INFORMATION:

APPLICANT: A peptide, immunogenic compositions,  
TITLE OF INVENTION: vaccines, and medicinal preparations including same; and  
TITLE OF INVENTION: methods for immunizing a mammal against LHRH and improving  
TITLE OF INVENTION: the meat quality of pigs.  
NUMBER OF SEQUENCES: 14  
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30 (ERO)  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/477,298

## FILING DATE:

INFORMATION FOR SEQ ID NO: 2:

## SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: unknown

TOPOLOGY: unknown

MOLECULE TYPE: peptide

HYPOTHETICAL: NO

ANTI-SENSE: NO

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10

## 20. US-08-480-494A-1 (1-10)

US-08-476-013-1 Sequence 1, Application US/08476013

## Sequence 1, Application US/08476013

## GENERAL INFORMATION:

APPLICANT: Meloan, Robert H.

ATTORNEY: Wensing, Cornelius J. G.

TITLE OF INVENTION: PEPTIDE, IMMUNOGENIC COMPOSITION AND VACCINE

TITLE OF INVENTION: OR MEDICINAL PREPARATION: A METHOD OF

TITLE OF INVENTION: IMMUNISING A MAMMAL AGAINST LHRH, AND A METHOD

TITLE OF INVENTION: OF IMPROVING THE MEAT QUALITY OF PIGS

NUMBER OF SEQUENCES: 14

CORRESPONDENCE ADDRESS:

ADDRESSEE: Cooper &amp; Dunham LLP

STREET: 1185 Avenue of the Americas

CITY: New York City

STATE: New York

COUNTRY: USA

ZIP: 10036

## COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.24

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/476,013

FILING DATE: 06-JUN-1995

CLASSIFICATION: 424

ATTORNEY/AGENT INFORMATION:

NAME: Katz, Robert D.

REGISTRATION NUMBER: 30,141

REFERENCE/DOCKET NUMBER: 40057-B

TELECOMMUNICATION INFORMATION:

TELEPHONE: (212) 278-0400

TELEFAX: (212) 391-0525

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

TOPOLOGY: unknown

MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10

## 21. US-08-480-494A-1 (1-10)

US-08-488-320A-1 Sequence 1, Application US/08488320A

## Sequence 1, Application US/08488320A

## GENERAL INFORMATION:

APPLICANT: Ladd, Anna

APPLICANT: Wang, Chang Yi

APPLICANT: Zamb, Timothy

TITLE OF INVENTION: Immunogenic Peptides which Contain LHRH

TITLE OF INVENTION: And A Helper T-Cell Epitope For Treatment Of Prostate Cancer

TITLE OF INVENTION: And Induction Of Infertility

NUMBER OF SEQUENCES: 114

CORRESPONDENCE ADDRESS:

ADDRESSEE: MORGAN &amp; FINNEGAN

STREET: 345 PARK AVENUE

CITY: NEW YORK

STATE: NEW YORK

COUNTRY: U.S.A.

ZIP: 10154

## COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: WordPerfect 5.1

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/488,320A

FILING DATE: 07-JUN-1995

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/488,351

FILING DATE: 07-JUN-1995

APPLICATION NUMBER: 08/446,692

FILING DATE: 07-JUN-1995

APPLICATION NUMBER: 08/229,275

FILING DATE: 14-APR-1994

APPLICATION NUMBER: 08/057,166

FILING DATE: 27-APR-1993

ATTORNEY/AGENT INFORMATION:

NAME: Maria C. H. Lin

REGISTRATION NUMBER: 29,323

REFERENCE/DOCKET NUMBER: 1151-41460S4

TELECOMMUNICATION INFORMATION:

TELEPHONE: (212)758-4800

TELEFAX: (212)751-6849

TELEX: 421792

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X  
10

## 22. US-08-480-494A-1 (1-10)

US-08-480-494A-1 Sequence 1, Application US/08480494A

## Sequence 1, Application US/08480494A

## GENERAL INFORMATION:

APPLICANT: Roeseke, Roger W.

TITLE OF INVENTION: LHRH Antagonist Peptides

NUMBER OF SEQUENCES: 1

## CORRESPONDENCE ADDRESS:

ADDRESSEE: LAHIVE & COCKFIELD  
STREET: 60 State Street, Suite 510  
CITY: Boston  
STATE: Massachusetts  
COUNTRY: USA  
ZIP: 02109-1875

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/480,494A  
FILING DATE: 07-JUN-1995  
CLASSIFICATION: 514

## ATTORNEY/AGENT INFORMATION:

NAME: Decontt, Giulio A.  
REGISTRATION NUMBER: 31,503  
REFERENCE/DOCKET NUMBER: PPI-007  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (617)227-7400  
TELEFAX: (617)227-5941

## INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:  
LENGTH: 10 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: peptide

Initial Score	=	10	Optimized Score	=	10	Significance	=	7.63
Residue Identity	=	100%	Matches	=	10	Mismatches	=	0
Gaps	=	0	Conservative Substitutions	=	0		=	0

X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X  
10

## 23. US-08-480-494A-1 (1-10)

US-08-591-917-1 Sequence 1, Application US/08591917

Sequence 1, Application US/08591917  
GENERAL INFORMATION:

APPLICANT: Nett, Torrance M  
APPLICANT: Glode, Leonard Michael  
TITLE OF INVENTION: A METHOD FOR TREATING CANCER  
NUMBER OF SEQUENCES: 3  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Sheridan Ross & McIntosh  
STREET: 1700 Lincoln Street, Suite 3500  
CITY: Denver  
STATE: Colorado  
COUNTRY: USA  
ZIP: 80203

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/591,917  
FILING DATE: 26-JAN-1996  
CLASSIFICATION: 514

## ATTORNEY/AGENT INFORMATION:

NAME: Kovarik, Joseph E.  
REGISTRATION NUMBER: 33,005  
REFERENCE/DOCKET NUMBER: 2730-3-2-1-1  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (303) 863-9700  
TELEFAX: (303) 863-0223

## INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:  
LENGTH: 10 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein

Initial Score	=	10	Optimized Score	=	10	Significance	=	7.63
Residue Identity	=	100%	Matches	=	10	Mismatches	=	0
Gaps	=	0	Conservative Substitutions	=	0		=	0

X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X  
10

## 24. US-08-480-494A-1 (1-10)

US-08-521-079-22 Sequence 22, Application US/08521079

Sequence 22, Application US/08521079  
GENERAL INFORMATION:

APPLICANT: Anna van der Zee, Irma Marianne van Die,  
APPLICANT: Willem Pieter Martin Hoekstra,  
APPLICANT: Josephus Theodorus Gielen.  
TITLE OF INVENTION: Carrier system against GNRH  
NUMBER OF SEQUENCES: 30  
CORRESPONDENCE ADDRESS:

ADDRESSEE: Akzo Pharma  
STREET: 1330 Piccard Drive  
CITY: Rockville  
STATE: Maryland  
COUNTRY: U.S.A.  
ZIP: 20850

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25 (EPO)  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/521,079  
FILING DATE:

## CLASSIFICATION: 435

## PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/078,661  
FILING DATE: 16-JUN-1993  
APPLICATION NUMBER: EPA No. 92.201.775.1  
FILING DATE: 18-JUN-1992

## CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:  
NAME: William M. Blackstone  
REGISTRATION NUMBER: 29,772  
REFERENCE/DOCKET NUMBER:

## TELECOMMUNICATION INFORMATION:

TELEPHONE: (301) 258-5200  
INFORMATION FOR SEQ ID NO: 22:

## SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
FEATURE:

OTHER INFORMATION: Glu at position 1 is pyroglutamic acid

Initial Score	=	10	Optimized Score	=	10	Significance	=	7.63
Residue Identity	=	100%	Matches	=	10	Mismatches	=	0
Gaps	=	0	Conservative Substitutions	=	0		=	0

X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X  
10

x . 10

25. US-08-480-494A-1 (1-10)  
US-08-796-598-6 Sequence 6, Application US/08796598

Sequence 6, Application US/08796598

GENERAL INFORMATION:

APPLICANT: PATTERSON, DALE H.

APPLICANT: TARR, GEORGE E.

TITLE OF INVENTION: METHODS AND APPARATUS FOR SEQUENCING

TITLE OF INVENTION: POLYMERS USING MASS SPECTROMETRY.

NUMBER OF SEQUENCES: 23

CORRESPONDENCE ADDRESS:

ADDRESSEE: Patent Administrator - Testa, Hurwitz &

ADDRESSEE: Thibeault

STREET: High Street Tower, 125 High Street

CITY: Boston

STATE: MA

COUNTRY: USA

ZIP: 02110

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/796,598

FILING DATE: 07-FEB-1997

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/446,055

FILING DATE: 19-MAY-1995

ATTORNEY/AGENT INFORMATION:

NAME: FLYNN Esq., Kerry A.

REGISTRATION NUMBER: 33,693

REFERENCE/DOCKET NUMBER: STP-115

TELECOMMUNICATION INFORMATION:

TELEPHONE: (617) 248-7000

TELEFAX: (617) 248-7100

INFORMATION FOR SEQ ID NO: 6:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

x x  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
x 10

26. US-08-480-494A-1 (1-10)  
US-08-724-416-5 Sequence 5, Application US/08724416

Sequence 5, Application US/08724416

GENERAL INFORMATION:

APPLICANT: Tamanoi, Fuyuhiko

TITLE OF INVENTION: Identification and Characterization of

TITLE OF INVENTION: Inhibitors of Protein Farnesyltransferase

NUMBER OF SEQUENCES: 10

CORRESPONDENCE ADDRESS:

ADDRESSEE: BRINKS HOFER GILSON & LIONE

STREET: P O. Box 13095

CITY: Chicago

STATE: IL

COUNTRY: USA  
ZIP: 60610

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/724,416

FILING DATE: 01-OCT-1996

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/000,931

FILING DATE: 05-JAN-1994

ATTORNEY/AGENT INFORMATION:

NAME: Martin, Alice O.

REGISTRATION NUMBER: 35,601

REFERENCE/DOCKET NUMBER: 7814/19

TELECOMMUNICATION INFORMATION:

TELEPHONE: (312) 321-4290

TELEFAX: (312) 321-4299

INFORMATION FOR SEQ ID NO: 5:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.63  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

x x  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
x 10



Sequence 9, Application US/07714540  
Patent No. 5262521

## GENERAL INFORMATION:

APPLICANT: Almquist, Ronald G.

TITLE OF INVENTION: ISOLATED ATRIAL PEPTIDE-DEGRADING

NUMBER OF SEQUENCES: 13  
ENZYME AND NOVEL COMPOUNDS USEFUL AS INHIBITORS THEREOF

CORRESPONDENCE ADDRESS:

ADDRESSEE: Irell & Manella

STREET: 545 Middlefield Road, Suite 200

CITY: Menlo Park

STATE: California

COUNTRY: USA

ZIP: 94025

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/714,540

FILING DATE: 19910607

CLASSIFICATION: 530

ATTORNEY/AGENT INFORMATION:

NAME: Reed, Dianne E.

REGISTRATION NUMBER: 31,292

REFERENCE/DOCKET NUMBER: 8500-0135.00

TELECOMMUNICATION INFORMATION:

TELEPHONE: 415-327-7250

TELEFAX: 415-327-2951

TELEX: 706141

INFORMATION FOR SEQ. ID NO: 9:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: AMINO ACID

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.77  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10

## 2. US-08-480-494A-1 (1-10)

US-07-690-983D-3 Sequence 32, Application US/07690983D

Sequence 32, Application US/07690983D  
Patent No. 5403586

## GENERAL INFORMATION:

APPLICANT: RUSSELL-JONES, Gregory J.

APPLICANT: STEWART, Andrew G.

TITLE OF INVENTION: FUSION PROTEINS

NUMBER OF SEQUENCES: 47

CORRESPONDENCE ADDRESS:

ADDRESSEE: Foley & Lardner

STREET: 3000 K Street, N.W.

CITY: Washington, D.C.

COUNTRY: USA

ZIP: 20007-5109

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/690,983D

FILING DATE: 25-JUN-1991

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/AU90/00373

FILING DATE: 24-AUG-1990

ATTORNEY/AGENT INFORMATION:

NAME: BENT, Stephen A.

REGISTRATION NUMBER: 29,768

REFERENCE/DOCKET NUMBER: 16786/148 CHAC

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202)672-5300

TELEFAX: (202)672-5399

INFORMATION FOR SEQ. ID NO: 32:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.77  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10

## 3. US-08-480-494A-1 (1-10)

US-07-690-983D-2 Sequence 2, Application US/07690983D

Sequence 2, Application US/07690983D  
Patent No. 5403586

## GENERAL INFORMATION:

APPLICANT: RUSSELL-JONES, Gregory J.

APPLICANT: STEWART, Andrew G.

TITLE OF INVENTION: FUSION PROTEINS

NUMBER OF SEQUENCES: 47

CORRESPONDENCE ADDRESS:

ADDRESSEE: Foley & Lardner

STREET: 3000 K Street, N.W.

CITY: Washington, D.C.

COUNTRY: USA

ZIP: 20007-5109

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/690,983D

FILING DATE: 25-JUN-1991

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/AU90/00373

FILING DATE: 24-AUG-1990

ATTORNEY/AGENT INFORMATION:

NAME: BENT, Stephen A.

REGISTRATION NUMBER: 29,768

REFERENCE/DOCKET NUMBER: 16786/148 CHAC

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202)672-5300

TELEFAX: (202)672-5399

INFORMATION FOR SEQ. ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

TOPOLOGY: unknown  
MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.77  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X 10

4. US-08-480-494A-1 (1-10)  
US-08-000-931-5 Sequence 5, Application US/08000931

Sequence 5, Application US/08000931  
Patent No. 5578477

GENERAL INFORMATION:

APPLICANT: Tamanoi Dr., Fuyuhiko  
TITLE OF INVENTION: IDENTIFICATION AND CHARACTERIZATION OF  
TITLE OF INVENTION: INHIBITORS OF PROTEIN FARNESYLTRANSFERASE  
NUMBER OF SEQUENCES: 10

CORRESPONDENCE ADDRESS:

ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W., Suite 500  
CITY: Washington, D.C.  
COUNTRY: USA

ZIP: 20007-5109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/000,931

FILING DATE: 05-JAN-1994

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: BENT, Stephen A.

REGISTRATION NUMBER: 29,768

REFERENCE/DOCKET NUMBER: 64098/102/ARDE

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202)672-5300

TELEFAX: (202)672-5399

TELEX: 904136

INFORMATION FOR SEQ ID NO: 5:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

Initial Score = 10 Optimized Score = 10 Significance = 7.77  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X 10

5. US-08-480-494A-1 (1-10)  
US-08-343-883-1 Sequence 1, Application US/08343883

Sequence 1, Application US/08343883  
Patent No. 5573767

GENERAL INFORMATION:

APPLICANT: Dufour, Raymond J.

APPLICANT: Roulet, Claude J.M.

APPLICANT: Chouvet, Claire D.

APPLICANT: Bonneau, Michel B.

TITLE OF INVENTION: Method for improving the organoleptic

TITLE OF INVENTION: qualities of the meat from uncastrated male domestic

TITLE OF INVENTION: animals, vaccines which are usable in this method, new

TITLE OF INVENTION: peptide, in particular for producing these vaccines...

NUMBER OF SEQUENCES: 2

CORRESPONDENCE ADDRESS:

ADDRESSEE: Larson and Taylor

STREET: 727 Twenty-Third Street, South

CITY: Arlington

STATE: Virginia

COUNTRY: USA

ZIP: 22202

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/343,883

FILING DATE: 17-NOV-1994

CLASSIFICATION: 424

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/946,495

FILING DATE: 09-NOV-1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: FR 9102513

FILING DATE: 01-MAR-1991

PRIOR APPLICATION DATA:

APPLICATION NUMBER: FR 9115289

FILING DATE: 10-DEC-1991

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

FEATURE:

NAME/KEY: Peptide

LOCATION: 10

OTHER INFORMATION: /label= NH2

OTHER INFORMATION: /note= "amidated glycine"

FEATURE:

NAME/KEY: Peptide

LOCATION: 1

OTHER INFORMATION: /label= pyro

OTHER INFORMATION: /note= "pyroglutamic acid"

PUBLICATION INFORMATION:

AUTHORS: Matsuo, H.

AUTHORS: Baba, Y.

AUTHORS: G. Nait, R. M.

AUTHORS: Arimura, A.

AUTHORS: Schally, A. V.

TITLE: Structure of the porcine LH- and

TITLE: FSH-releasing hormone. I. The proposed amino acid

TITLE: sequence.

JOURNAL: Biochem. Biophys. Res. Commun.

VOLUME: 43

ISSUE: 6

PAGES: 1334-1339

DATE: 1971

RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 1 TO 10  
Initial Score = 10 Optimized Score = 10 Significance = 7.77  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X

X 10

6. US-08-480-494A-1 (1-10)  
US-08-428-488-22 Sequence 22, Application US/08428488

Sequence 22, Application US/08428488

Patent No. 5624894

GENERAL INFORMATION:

APPLICANT: BODOR, Nicholas S.

TITLE OF INVENTION: BRAIN-ENHANCED DELIVERY OF NEUROACTIVE

TITLE OF INVENTION: PEPTIDES BY SEQUENTIAL METABOLISM

NUMBER OF SEQUENCES: 107

CORRESPONDENCE ADDRESS:

ADDRESSEE: Burns, Doane, Swecker & Mathis

STREET: P.O. Box 1404

CITY: Alexandria

STATE: Virginia

COUNTRY: United States

ZIP: 22313-1404

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: IBM PC compatible

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/428,488

FILING DATE: 27-APR-1995

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: Baumeister, Mary Katherine

REGISTRATION NUMBER: 26,254

REFERENCE/DOCKET NUMBER: 028724-087

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703) 836-6620

TELEFAX: (703) 836-2021

INFORMATION FOR SEQ ID NO: 22:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: peptide

FEATURE:

NAME/KEY: Modified-site

LOCATION: 1

OTHER INFORMATION: /note= "Position 1 = p-Glu."

FEATURE:

NAME/KEY: Modified-site

LOCATION: 10

OTHER INFORMATION: /note= "Position 10 = Gly-NH2."

Initial Score = 10 Optimized Score = 7.77  
Residue Identity = 100 Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X  
EHMSYGLRPG  
|||||||  
EHMSYGLRPG  
X 10

7. US-08-480-494A-1 (1-10)  
US-07-690-983D-4 Sequence 47, Application US/07690983D

Sequence 47, Application US/07690983D

Patent No. 5403586

GENERAL INFORMATION:

APPLICANT: RUSSELL-JONES, Gregory J.

APPLICANT: STEWART, Andrew G.

APPLICANT: TSONIS, Con G.

TITLE OF INVENTION: FUSION PROTEINS

NUMBER OF SEQUENCES: 47

CORRESPONDENCE ADDRESS:

ADDRESSEE: Foley & Lardner

STREET: 3000 K Street, N.W.

CITY: Washington, D.C.

COUNTRY: USA

ZIP: 20007-5109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: IBM PC compatible

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/690,983D

FILING DATE: 25-JUN-1991

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/AU90/00373

FILING DATE: 24-AUG-1990

ATTORNEY/AGENT INFORMATION:

NAME: BENT, Stephen A.

REGISTRATION NUMBER: 29,768

REFERENCE/DOCKET NUMBER: 16786/148 CHAC

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202)672-5300

TELEFAX: (202)672-5399

INFORMATION FOR SEQ ID NO: 47:

SEQUENCE CHARACTERISTICS:

LENGTH: 84 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 7.77  
Residue Identity = 100 Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X 10  
EHMSYGLRPG  
|||||||  
EHMSYGLRPG  
X 10 X

8. US-08-480-494A-1 (1-10)  
US-07-690-983D-4 Sequence 45, Application US/07690983D

Sequence 45, Application US/07690983D

Patent No. 5403586

GENERAL INFORMATION:

APPLICANT: RUSSELL-JONES, Gregory J.

APPLICANT: STEWART, Andrew G.

TITLE OF INVENTION: FUSION PROTEINS

NUMBER OF SEQUENCES: 47

CORRESPONDENCE ADDRESS:

ADDRESSEE: Foley & Lardner

STREET: 3000 K Street, N.W.

CITY: Washington, D.C.

COUNTRY: USA

ZIP: 20007-5109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: IBM PC compatible

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/690,983D

FILING DATE: 25-JUN-1991

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/AU90/00373

FILING DATE: 24-AUG-1990

## ATTORNEY/AGENT INFORMATION:

NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768  
REFERENCE/DOCKET NUMBER: 16786/148 CHAC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300

## INFORMATION FOR SEQ ID NO: 45:

SEQUENCE CHARACTERISTICS:  
LENGTH: 44 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

## MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.77  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X 10  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10 X

9. US-08-480-494A-1 (1-10)  
US-07-690-983D-4 Sequence 43, Application US/07690983D

Sequence 43, Application US/07690983D  
Patent No. 5403586

## GENERAL INFORMATION:

APPLICANT: RUSSELL-JONES, Gregory J.  
APPLICANT: STEWART, Andrew G.  
APPLICANT: TSONIS, Con G.  
TITLE OF INVENTION: FUSION PROTEINS  
NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W.  
CITY: Washington, D.C.  
COUNTRY: USA

ZIP: 20007-5109

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/690,983D  
FILING DATE: 25-JUN-1991  
CLASSIFICATION: 435

## PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/AU90/00373  
FILING DATE: 24-AUG-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768  
REFERENCE/DOCKET NUMBER: 16786/148 CHAC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300

## INFORMATION FOR SEQ ID NO: 43:

SEQUENCE CHARACTERISTICS:  
LENGTH: 24 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

## MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.77  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X 10

EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10 X

10. US-08-480-494A-1 (1-10)  
US-07-690-983D-4 Sequence 40, Application US/07690983D

Sequence 40, Application US/07690983D  
Patent No. 5403586

## GENERAL INFORMATION:

APPLICANT: RUSSELL-JONES, Gregory J.  
APPLICANT: STEWART, Andrew G.  
APPLICANT: TSONIS, Con G.  
TITLE OF INVENTION: FUSION PROTEINS  
NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W.  
CITY: Washington, D.C.  
COUNTRY: USA

ZIP: 20007-5109

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/690,983D  
FILING DATE: 25-JUN-1991  
CLASSIFICATION: 435

## PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/AU90/00373  
FILING DATE: 24-AUG-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768  
REFERENCE/DOCKET NUMBER: 16786/148 CHAC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300

## INFORMATION FOR SEQ ID NO: 40:

SEQUENCE CHARACTERISTICS:  
LENGTH: 20 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

## MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.77  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X X  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10

## 11. US-08-480-494A-1 (1-10)

## US-07-690-983D-2 Sequence 20, Application US/07690983D

Sequence 20, Application US/07690983D  
Patent No. 5403586

## GENERAL INFORMATION:

APPLICANT: RUSSELL-JONES, Gregory J.  
APPLICANT: STEWART, Andrew G.  
APPLICANT: TSONIS, Con G.  
TITLE OF INVENTION: FUSION PROTEINS  
NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Foley & Lardner

STREET: 3000 K Street, N.W.  
CITY: Washington, D.C.  
COUNTRY: USA  
ZIP: 20007-5109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/690,983D  
FILING DATE: 25-JUN-1991  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/AU90/00373  
FILING DATE: 24-AUG-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768  
REFERENCE/DOCKET NUMBER: 16786/148 CHAC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300  
TELEFAX: (202)672-5399  
INFORMATION FOR SEQ ID NO: 20:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 18 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein

Initial Score	=	10	Optimized Score	=	10	Significance	=	7.77
Residue Identity	=	100%	Matches	=	10	Mismatches	=	0
Gaps	=	0	Conservative Substitutions	=	0			0

X 10  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10 X

12. US-08-480-494A-1 (1-10)  
US-07-690-983D-2 Sequence 28, Application US/07690983D

Sequence 28, Application US/07690983D  
Patent No. 5403586  
GENERAL INFORMATION:  
APPLICANT: RUSSELL-JONES, Gregory J.  
APPLICANT: STEWART, Andrew G.  
APPLICANT: TSONIS, Con G.  
TITLE OF INVENTION: FUSION PROTEINS  
NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W.  
CITY: Washington, D.C.  
COUNTRY: USA  
ZIP: 20007-5109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/690,983D  
FILING DATE: 25-JUN-1991  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/AU90/00373  
FILING DATE: 24-AUG-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768

REFERENCE/DOCKET NUMBER: 16786/148 CHAC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300  
TELEFAX: (202)672-5399  
INFORMATION FOR SEQ ID NO: 28:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 18 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein

Initial Score	=	10	Optimized Score	=	10	Significance	=	7.77
Residue Identity	=	100%	Matches	=	10	Mismatches	=	0
Gaps	=	0	Conservative Substitutions	=	0			0

X 10  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10 X

13. US-08-480-494A-1 (1-10)  
US-07-690-983D-1 Sequence 18, Application US/07690983D

Sequence 18, Application US/07690983D  
Patent No. 5403586  
GENERAL INFORMATION:  
APPLICANT: RUSSELL-JONES, Gregory J.  
APPLICANT: STEWART, Andrew G.  
APPLICANT: TSONIS, Con G.  
TITLE OF INVENTION: FUSION PROTEINS  
NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W.  
CITY: Washington, D.C.  
COUNTRY: USA  
ZIP: 20007-5109  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/690,983D  
FILING DATE: 25-JUN-1991  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/AU90/00373  
FILING DATE: 24-AUG-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768  
REFERENCE/DOCKET NUMBER: 16786/148 CHAC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300  
TELEFAX: (202)672-5399  
INFORMATION FOR SEQ ID NO: 18:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 17 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein

Initial Score	=	10	Optimized Score	=	10	Significance	=	7.77
Residue Identity	=	100%	Matches	=	10	Mismatches	=	0
Gaps	=	0	Conservative Substitutions	=	0			0

X 10  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10 X

X .10 X

14. US-08-480-494A-1 (1-10)  
US-07-690-983D-1 Sequence 16, Application US/07690983D

Sequence 16, Application US/07690983D  
Patent No. 5403586

GENERAL INFORMATION:

APPLICANT: RUSSELL-JONES, Gregory J.  
APPLICANT: STEWART, Andrew G.  
APPLICANT: TSONIS, Con G.  
TITLE OF INVENTION: FUSION PROTEINS  
NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W.  
CITY: Washington, D.C.  
COUNTRY: USA

ZIP: 20007-5109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/690,983D  
FILING DATE: 25-JUN-1991  
CLASSIFICATION: 435

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/AU90/00373  
FILING DATE: 24-AUG-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768  
REFERENCE/DOCKET NUMBER: 16786/148 CHAC

TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300  
TELEFAX: (202)672-5399  
INFORMATION FOR SEQ ID NO: 16:

SEQUENCE CHARACTERISTICS:

LENGTH: 17 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score	=	10	Optimized Score	=	10	Significance	=	7.77
Residue Identity	=	100%	Matches	=	10	Mismatches	=	0
Gaps	=	0	Conservative Substitutions	=	0			0

X 10  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10 X

15. US-08-480-494A-1 (1-10)  
US-07-690-983D-1 Sequence 14, Application US/07690983D

Sequence 14, Application US/07690983D  
Patent No. 5403586

GENERAL INFORMATION:

APPLICANT: RUSSELL-JONES, Gregory J.  
APPLICANT: STEWART, Andrew G.  
APPLICANT: TSONIS, Con G.  
TITLE OF INVENTION: FUSION PROTEINS  
NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W.  
CITY: Washington, D.C.  
COUNTRY: USA

ZIP: 20007-5109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/690,983D  
FILING DATE: 25-JUN-1991  
CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/AU90/00373  
FILING DATE: 24-AUG-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768  
REFERENCE/DOCKET NUMBER: 16786/148 CHAC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300  
TELEFAX: (202)672-5399

INFORMATION FOR SEQ ID NO: 14:

SEQUENCE CHARACTERISTICS:  
LENGTH: 16 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

MOLECULE TYPE: protein

Initial Score	=	10	Optimized Score	=	10	Significance	=	7.77
Residue Identity	=	100%	Matches	=	10	Mismatches	=	0
Gaps	=	0	Conservative Substitutions	=	0			0

X 10  
EHMSYGLRPG  
|||||  
EHMSYGLRPG  
X 10 X

16. US-08-480-494A-1 (1-10)  
US-07-690-983D-2 Sequence 22, Application US/07690983D

Sequence 22, Application US/07690983D  
Patent No. 5403586

GENERAL INFORMATION:

APPLICANT: RUSSELL-JONES, Gregory J.  
APPLICANT: STEWART, Andrew G.  
APPLICANT: TSONIS, Con G.  
TITLE OF INVENTION: FUSION PROTEINS  
NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W.  
CITY: Washington, D.C.  
COUNTRY: USA

ZIP: 20007-5109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/690,983D  
FILING DATE: 25-JUN-1991  
CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/AU90/00373  
FILING DATE: 24-AUG-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768  
REFERENCE/DOCKET NUMBER: 16786/148 CHAC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300

TELEFAX: (202)672-5399  
INFORMATION FOR SEQ ID NO: 22:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 14 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.77  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X 10  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X 10 X

17. US-08-480-494A-1 (1-10)  
US-07-690-983D-2 Sequence 24, Application US/07690983D

Sequence 24, Application US/07690983D  
Patent No. 5403586

GENERAL INFORMATION:  
APPLICANT: RUSSELL-JONES, Gregory J.  
APPLICANT: STEWART, Andrew G.  
APPLICANT: TSONIS, Con G.  
TITLE OF INVENTION: FUSION PROTEINS  
NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W.  
CITY: Washington, D.C.  
COUNTRY: USA  
ZIP: 20007-5109

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/690,983D  
FILING DATE: 25-JUN-1991  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/AU90/00373  
FILING DATE: 24-AUG-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768  
REFERENCE/DOCKET NUMBER: 16786/148 CHAC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300  
TELEFAX: (202)672-5399  
INFORMATION FOR SEQ ID NO: 24:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 14 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.77  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X 10  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X 10 X

18. US-08-480-494A-1 (1-10)  
US-07-690-983D-2 Sequence 26, Application US/07690983D

Sequence 26, Application US/07690983D  
Patent No. 5403586  
GENERAL INFORMATION:  
APPLICANT: RUSSELL-JONES, Gregory J.  
APPLICANT: STEWART, Andrew G.  
APPLICANT: TSONIS, Con G.  
TITLE OF INVENTION: FUSION PROTEINS  
NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W.  
CITY: Washington, D.C.  
COUNTRY: USA  
ZIP: 20007-5109

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/690,983D  
FILING DATE: 25-JUN-1991  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/AU90/00373  
FILING DATE: 24-AUG-1990  
ATTORNEY/AGENT INFORMATION:  
NAME: BENT, Stephen A.  
REGISTRATION NUMBER: 29,768  
REFERENCE/DOCKET NUMBER: 16786/148 CHAC  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (202)672-5300  
TELEFAX: (202)672-5399  
INFORMATION FOR SEQ ID NO: 26:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 14 amino acids  
TYPE: amino acid  
TOPOLOGY: linear  
MOLECULE TYPE: protein

Initial Score = 10 Optimized Score = 10 Significance = 7.77  
Residue Identity = 100% Matches = 10 Mismatches = 0  
Gaps = 0 Conservative Substitutions = 0

X 10  
EHWSYGLRPG  
|||||  
EHWSYGLRPG  
X 10 X

19. US-08-480-494A-1 (1-10)  
US-07-690-983D-3 Sequence 30, Application US/07690983D

Sequence 30, Application US/07690983D  
Patent No. 5403586  
GENERAL INFORMATION:  
APPLICANT: RUSSELL-JONES, Gregory J.  
APPLICANT: STEWART, Andrew G.  
APPLICANT: TSONIS, Con G.  
TITLE OF INVENTION: FUSION PROTEINS  
NUMBER OF SEQUENCES: 47  
CORRESPONDENCE ADDRESSES:  
ADDRESSEE: Foley & Lardner  
STREET: 3000 K Street, N.W.  
CITY: Washington, D.C.  
COUNTRY: USA  
ZIP: 20007-5109

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: Patentin Release #1.0, Version #1.25  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/07/690,983D  
 FILING DATE: 25-JUN-1991  
 CLASSIFICATION: 435  
 PRIOR APPLICATION DATA:  
 APPLICATION NUMBER: PCT/AU90/00373  
 FILING DATE: 24-AUG-1990  
 ATTORNEY/AGENT INFORMATION:  
 NAME: BENT, Stephen A.  
 REGISTRATION NUMBER: 29,768  
 REFERENCE/DOCKET NUMBER: 16786/148 CHAC  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: (202)672-5300  
 TELEFAX: (202)672-5399  
 INFORMATION FOR SEQ ID NO: 30:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 14 amino acids  
 TYPE: amino acid  
 TOPOLOGY: linear  
 MOLECULE TYPE: protein

Initial Score	-	10	Optimized Score	-	10	Significance	-	7.77
Residue Identity	-	100%	Matches	-	10	Mismatches	-	0
Gaps	-	0	Conservative Substitutions	-	0		-	0

X  
 10  
 EHWSYGLRPG  
 |||||  
 EHWSYGLRPG  
 X  
 10 X

20. US-08-480-494A-1 (1-10)  
 US-08-184-935-6 Sequence 6, Application US/08184935

Sequence 6, Application US/08184935  
 Patent No. 5476770  
 GENERAL INFORMATION:  
 APPLICANT: PRADELLES, PHILIPPE  
 TITLE OF INVENTION: IMMUNOMETRIC DETERMINATION OF AN ANTIGEN  
 TITLE OF INVENTION: OR HAPTEN  
 NUMBER OF SEQUENCES: 12  
 CORRESPONDENCE ADDRESS:  
 ADDRESSEE: P. C. STREET, 1755 S. Jefferson Davis Highway, Suite 400  
 CITY: Arlington  
 STATE: Virginia  
 COUNTRY: U.S.A.  
 ZIP: 22202

COMPUTER READABLE FORM:  
 MEDIUM TYPE: Floppy disk  
 COMPUTER: IBM PC compatible  
 OPERATING SYSTEM: PC-DOS/MS-DOS  
 SOFTWARE: Patentin Release #1.0, Version #1.25  
 CURRENT APPLICATION DATA:  
 APPLICATION NUMBER: US/08/184,935  
 FILING DATE: 24-JAN-1994  
 CLASSIFICATION: 435  
 ATTORNEY/AGENT INFORMATION:  
 NAME: Oblon, No. 5476770man F.  
 REGISTRATION NUMBER: 24,618  
 REFERENCE/DOCKET NUMBER: 846-286-0  
 TELECOMMUNICATION INFORMATION:  
 TELEPHONE: (703) 413-3000  
 TELEFAX: (703) 413-2220  
 TELEX: 248855 OPAT UR  
 INFORMATION FOR SEQ ID NO: 6:  
 SEQUENCE CHARACTERISTICS:  
 LENGTH: 10 amino acids

TYPE: amino acid  
 TOPOLOGY: unknown  
 MOLECULE TYPE: peptide  
 FEATURE:  
 NAME/KEY: Modified-site  
 LOCATION: 10  
 OTHER INFORMATION: /note="C-terminal amide"

Initial Score	-	9	Optimized Score	-	9	Significance	-	6.91
Residue Identity	-	90%	Matches	-	9	Mismatches	-	1
Gaps	-	0	Conservative Substitutions	-	0		-	0

X  
 X  
 EHWSYGLRPG  
 |||||  
 YHWSYGLRPG  
 X  
 10

D-position

borin - 08 / 480494

Page 1

=> fil reg

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STRUCTURE FILE UPDATES: 1 JUNE 97 HIGHEST RN 189261-10-7  
DICTIONARY FILE UPDATES: 1 JUNE 97 HIGHEST RN 189357-16-2

TSCA INFORMATION NOW CURRENT THROUGH DECEMBER 1996

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

=> d stat que l23

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L2	4	SEA FILE=REGISTRY ABB=ON	PLU=ON	(AFWSYMLRPA)/SQEP
L3	4	SEA FILE=REGISTRY ABB=ON	PLU=ON	(AFASYRLMPA)/SQEP
L4	39	SEA FILE=REGISTRY ABB=ON	PLU=ON	(AFASYALKPA)/SQEP
L5	291	SEA FILE=REGISTRY ABB=ON	PLU=ON	(AFASYKLKPA)/SQEP
L6	8	SEA FILE=REGISTRY ABB=ON	PLU=ON	('SAR'FASYALKPA)/SQEP
L7	1	SEA FILE=REGISTRY ABB=ON	PLU=ON	L1 AND C72H95CLN14O14/M F
L8	1	SEA FILE=REGISTRY ABB=ON	PLU=ON	L1 AND C72H95CLN14O14.C 2HF3O2/MF
L9	2	SEA FILE=REGISTRY ABB=ON	PLU=ON	L1 NOT (L7 OR L8)
L10	2	SEA FILE=REGISTRY ABB=ON	PLU=ON	L2 AND DIMETHYLSULFONIO
L11	2	SEA FILE=REGISTRY ABB=ON	PLU=ON	L3 AND DIMETHYLSULFONIO
L12	2	SEA FILE=REGISTRY ABB=ON	PLU=ON	L6 AND C77H99CLN13O13/M F
L13	1	SEA FILE=REGISTRY ABB=ON	PLU=ON	L12 NOT L ALANYL
L17	2	SEA FILE=REGISTRY ABB=ON	PLU=ON	L4 AND C75H95CLN14O14
L19	2	SEA FILE=REGISTRY ABB=ON	PLU=ON	L4 AND C77H98CLN14O15
L20	1	SEA FILE=REGISTRY ABB=ON	PLU=ON	L4 AND INNER SALT
L22	1	SEA FILE=REGISTRY ABB=ON	PLU=ON	L5 AND 16.195/RID
L23	15	SEA FILE=REGISTRY ABB=ON	PLU=ON	(L17 OR L19 OR L20 OR L 13 OR L10 OR L11 OR L22 OR L7 OR L8 OR L9)

=> d his l24-

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L24 0 S L23

FILE 'HCAPLUS' ENTERED AT 15:48:17 ON 02 JUN 1997  
L25 3 S L23

FILE 'USPATFULL' ENTERED AT 15:48:20 ON 02 JUN 1997  
L26 0 S L23

FILE 'REGISTRY' ENTERED AT 15:48:32 ON 02 JUN 1997

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 15:48:46 ON 02 JUN 1997  
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FILE COVERS 1967 - 2 Jun 1997 VOL 126 ISS 22  
FILE LAST UPDATED: 2 Jun 1997 (970602/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

'BI AB' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d l25 1- bib abs hitrn

L25 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 1997 ACS

AN 1997:168540 HCAPLUS

DN 126:152828

TI LHRH antagonist synthetic peptide analogs for use as cancer  
inhibitors, contraceptives, or other pharmaceuticals

IN Roeske, Roger W.

PA Indiana University Foundation, USA; Roeske, Roger W.

SO PCT Int. Appl., 52 pp.

CODEN: PIXXD2

PI WO 9640757 A2 961219

DS W: AU, CA, JP, US

RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,  
SE

AI WO 96-US9852 960607

PRAI US 95-480494 950607

DT Patent

LA English

OS MARPAT 126:152828

AB Many novel LH-releasing hormone(LHRH) antagonist peptide analogs or  
peptide mimetics, pharmaceutical compns. thereof, and methods of use  
thereof, are disclosed. The LHRH antagonist comprises a peptide  
compd., wherein a residue of the peptide compd. corresponding to the  
amino acid at position 6 of natural mammalian LHRH comprises a  
hydrophilic N-acyl moiety, a dipolar moiety, a sulfonium moiety, a  
receptor-modifying moiety or a small polar moiety. LHRH antagonist  
peptides are useful as inhibitors of sex hormone-dependent cancers  
(e.g., prostate cancer). LHRH antagonist peptides are also useful  
as contraceptive agents. The peptides can be used to treat other  
LHRH-related disorders as well, such as precocious puberty or  
premenstrual syndrome. The anti-ovulatory and histamine release  
activity of LHRH antagonists are compared. S.c. injections of LHRH  
antagonists suppressed plasma testosterone levels.

IT **186835-69-8P 186837-22-9P 186837-35-4P**

**186837-47-8P 186837-76-3P 186837-97-8P**

RL: BAC (Biological activity or effector, except adverse); PRP  
(Properties); SPN (Synthetic preparation); THU (Therapeutic use);  
BIOL (Biological study); PREP (Preparation); USES (Uses)

(LHRH antagonist synthetic peptide analogs with pharmaceutical  
applications as cancer inhibitors or contraceptive agents)

L25 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 1997 ACS

AN 1996:696047 HCAPLUS

DN 126:26943

TI Structure-activity studies of GnRH antagonists having dipolar  
residues

AU Guo, L.; Tian, Z.; Edwards, P. J.; Zhang, Y. L.; Shobana, N.;  
Roeske, R. W.

CS School Medicine, Indiana University, Indianapolis, IN, 46202, USA

SO Pept.: Chem., Struct. Biol., Proc. Am. Pept. Symp., 14th (1996),  
Meeting Date 1995, 665-666. Editor(s): Kaumaya, Pravin T. P.;

Hodges, Robert S. Publisher: Mayflower Scientific, Kingswinford, UK.  
CODEN: 63NTAF

DT Conference

LA English

AB The authors report the synthesis of several GnRH antagonists having a D-Lys(ONic), D-Pal(N-O), or D-Pal(CH<sub>2</sub>COOH) residue in position 6 or 3 along with their antioviulatory (AO) effects and histamine releasing toxicity (HRT). Compared with the antagonist D-Glu(taurine)6, GnRH-D-Pal(N-O)6 has almost the same level of HRT but much better AO activity, 50% inhibition of ovulation at a dose of 1 .mu.g in rats. GnRH D-Lys(ONic)6 and D-Pal(CH<sub>2</sub>COOH)6 also have low HRT and good AOA of 1/8 and 6/8 at 1.0 .mu.g. Substitution of N-Me-Tyr5 for Tyr5 does not influence AOA and HRT to any extent. Replacement of D-Pal(N-O)6 by D-Pal(N-O)3 increases HRT remarkable from 145 to 25 .mu.g/mL.

IT **184679-82-1P**

RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)  
(structure-activity studies of GnRH antagonists having dipolar residues)

L25 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 1997 ACS

AN 1994:427074 HCAPLUS

DN 121:27074

TI Structure-activity studies of LH-RH antagonists with side-chain modified D-lysine in position 6

AU Tian, Zhen-ping; Zhang, Yong-liang; Kowalczyk, Maria; Hrinyo-Pavlina, Tanya; Edwards, Patrick; Roeske, Roger

CS Dep. Biochem. and Mol. Biol., Indiana Univ. Sch. Med., Indianapolis, IN, 46202-5122, USA

SO Pept.: Biol. Chem., Proc. Chin. Pept. Symp. (1993), Meeting Date 1992, 45-8. Editor(s): Edited by Du, Yu-cang; Tam, James P.; Zhang, You-shang. Publisher: ESCOM, Leiden, Neth.

CODEN: 59YOAI

DT Conference

LA English

AB Twenty-two LH-RH antagonists were synthesized with a side-chain modified D-lysine in position 6, having the general sequence Ac-D-Nal1-4-Cl-.delta.-Phe2-D-Pal3-Ser-Tyr-D-Lys(X)6-Leu-Lys(iPr)8-Pro-D-Ala-NH<sub>2</sub> and were tested for antioviulatory activity and histamine-releasing toxicity. Modification of the D-Lys side chain .epsilon.-amino group in position 6 with arom. moieties produced less active LH-RH antagonists, whereas incorporation of an arom. heterocyclic moiety with a pos. charge on the ring increased the antioviulatory activity dramatically, although histamine-releasing toxicity was also increased. Replacement of the .epsilon.-amino group of .delta.-lysine with either another primary amino group, a secondary amino group, or a tertiary amino group provided good antioviulatory activity but the histamine-releasing toxicity was not improved. The compds. with pyroglutamic acid or its thio analog attached to D-lysine side-chain showed 90-100% inhibition of ovulation with reasonably low histamine-releasing toxicity.

IT **155944-29-9**

RL: BIOL (Biological study)  
(antioviulatory activity and histamine-releasing toxicity of, structure in relation to)

=> fil reg

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STRUCTURE FILE UPDATES: 1 JUNE 97 HIGHEST RN 189261-10-7  
 DICTIONARY FILE UPDATES: 1 JUNE 97 HIGHEST RN 189357-16-2

TSCA INFORMATION NOW CURRENT THROUGH DECEMBER 1996

Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

=> d 123 1- sqide can

L23 ANSWER 1 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN 186837-97-8 REGISTRY

CN **D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-L-tyrosyl-D-arginyl-L-leucyl-(2S)-2-amino-4-(dimethylsulfonio)butanoyl-L-prolyl-, salt with trifluoroacetic acid (1:1), mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)**

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified

type	location		description
terminal mod.	Ala-1	-	N-acetyl
terminal mod.	Ala-10	-	C-terminal amide
modification	-	-	undetermined modification
modification	Ala-1	-	2-naphthalenyl<2-Naph>
modification	Phe-2	-	chloro<Cl>
modification	Ala-3	-	3-pyridinyl<3Py>
modification	Met-8	-	methyl<Me>

SEQ 1 AFASYRLMPA

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HITS AT: 1-10

MF C70 H93 Cl N15 O13 S . C2 H F3 O2 . C2 F3 O2

SR CA

LC STN Files: CA, CAPLUS

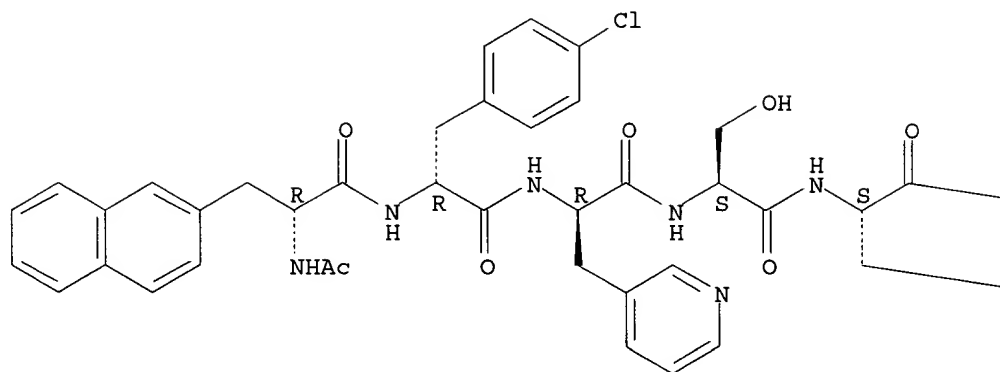
CM 1

CRN 186837-96-7

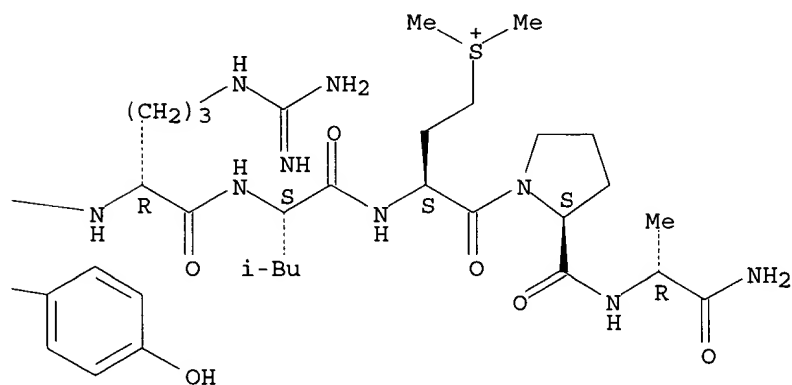
CMF C70 H93 Cl N15 O13 S

Absolute stereochemistry.

PAGE 1-A



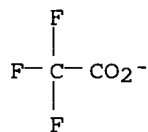
PAGE 1-B



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CRN 14477-72-6

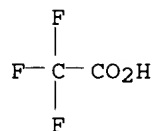
CMF C2 F3 O2



CM 3

CRN 76-05-1

CMF C2 H F3 O2



1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:152828

L23 ANSWER 2 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN 186837-96-7 REGISTRY

CN **D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-L-tyrosyl-D-arginyl-L-leucyl-(2S)-2-amino-4-(dimethylsulfonio)butanoyl-L-prolyl- (9CI)**  
(CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified

type	location		description
terminal mod.	Ala-1	-	N-acetyl
terminal mod.	Ala-10	-	C-terminal amide
modification	Ala-1	-	2-naphthalenyl<2-Naph>
modification	Phe-2	-	chloro<Cl>
modification	Ala-3	-	3-pyridinyl<3Py>
modification	Met-8	-	methyl<Me>

SEQ 1 AFASYRLMPA

=====

HITS AT: 1-10

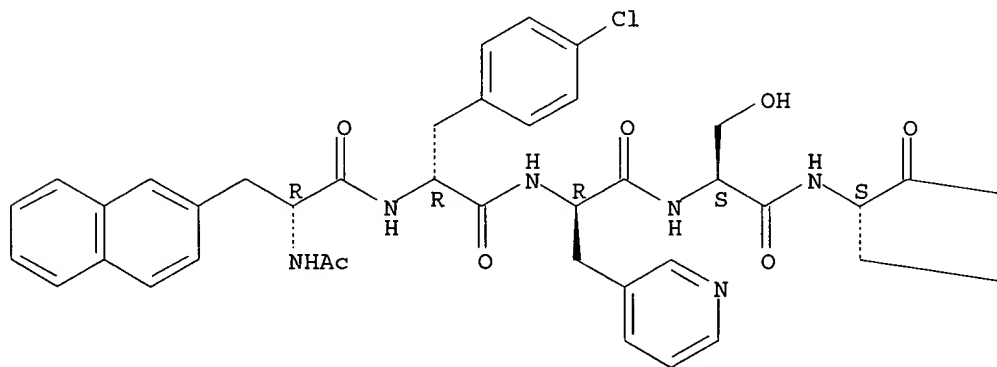
MF C70 H93 Cl N15 O13 S

CI COM

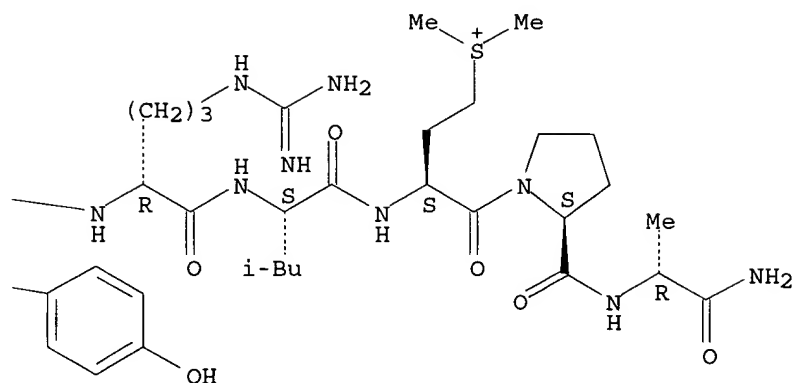
SR CA

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



L23 ANSWER 3 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN 186837-76-3 REGISTRY

CN **D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-D-tryptophyl-L-seryl-L-tyrosyl-(2R)-2-amino-4-(dimethylsulfonio)butanoyl-L-leucyl-L-arginyl-L-prolyl-, salt with trifluoroacetic acid (1:1), mono(trifluoroacetate) (salt) (9CI)**  
(CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified

type	location		description
terminal mod.	Ala-1	-	N-acetyl
terminal mod.	Ala-10	-	C-terminal amide
modification	-	-	undetermined modification
modification	Ala-1	-	2-naphthalenyl<2-Naph>
modification	Phe-2	-	chloro<Cl>
modification	Met-6	-	methyl<Me>

SEQ 1 AFWSYMLRPA

=====

HITS AT: 1-10

MF C73 H95 Cl N15 O13 S . C2 H F3 O2 . C2 F3 O2

SR CA

LC STN Files: CA, CAPLUS

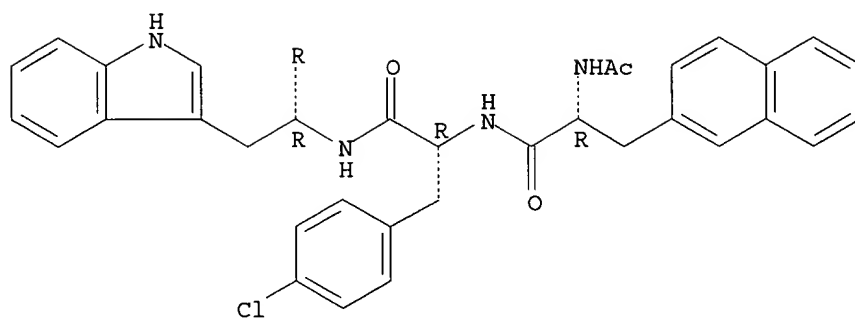
CM 1

CRN 186837-75-2

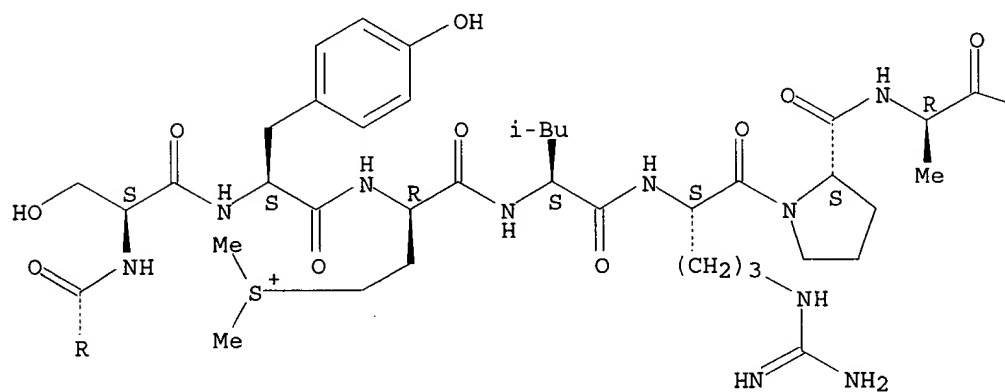
CMF C73 H95 Cl N15 O13 S

Absolute stereochemistry.

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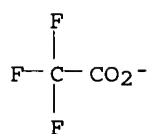
PAGE 2-B



CM 2

CRN 14477-72-6

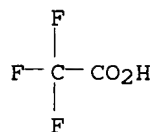
CMF C2 F3 O2



CM 3

CRN 76-05-1

CMF C2 H F3 O2



1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:152828

L23 ANSWER 4 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN 186837-75-2 REGISTRY

CN **D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-D-tryptophyl-L-seryl-L-tyrosyl-(2R)-2-amino-4-(dimethylsulfonio)butanoyl-L-leucyl-L-arginyl-L-prolyl- (9CI)**  
(CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified

type	location		description
terminal mod.	Ala-1	-	N-acetyl
terminal mod.	Ala-10	-	C-terminal amide
modification	Ala-1	-	2-naphthalenyl<2-Naph>
modification	Phe-2	-	chloro<Cl>
modification	Met-6	-	methyl<Me>

SEQ 1 AFWSYMLRPA

=====

HITS AT: 1-10

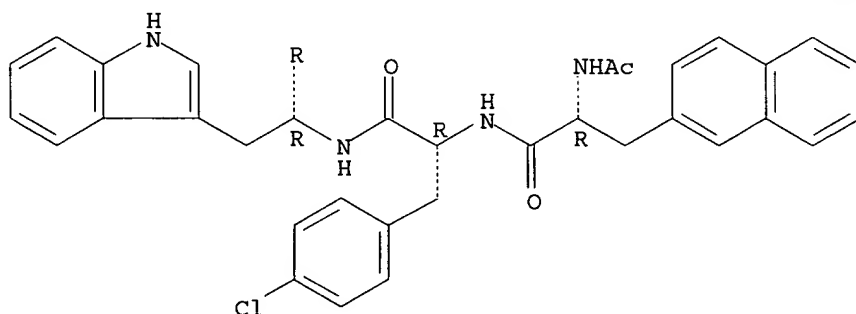
MF C73 H95 Cl N15 O13 S

CI COM

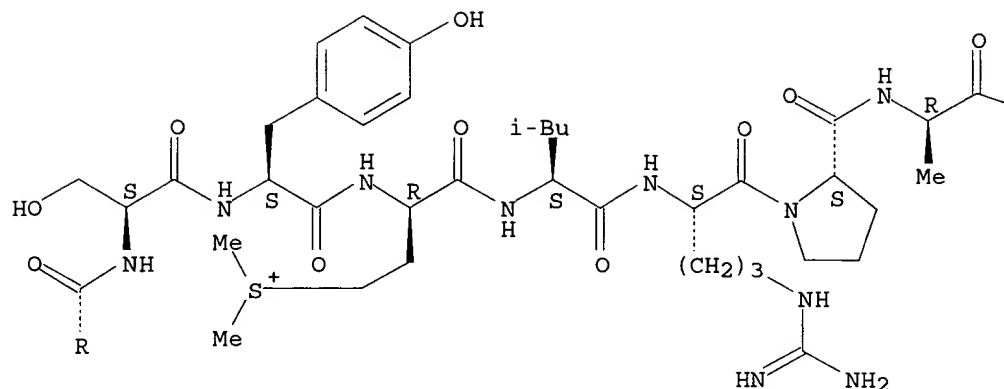
SR CA

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



PAGE 2-B

—NH<sub>2</sub>

L23 ANSWER 5 OF 15 REGISTRY COPYRIGHT 1997 ACS  
 RN 186837-47-8 REGISTRY  
 CN D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-N-methyl-L-tyrosyl-D-asparaginyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 SQL 10  
 NTE modified

type	location		description
terminal mod.	Ala-1	-	N-acetyl
terminal mod.	Ala-10	-	C-terminal amide
modification	-	-	undetermined modification
modification	Ala-1	-	2-naphthalenyl<2-Naph>
modification	Phe-2	-	chloro<Cl>
modification	Ala-3	-	3-pyridinyl<3Py>
modification	Tyr-5	-	methyl<Me>
modification	Lys-8	-	1-methylethyl<i-Pr>

SEQ 1 AFASYNLKPA

=====

HITS AT: 1-10

MF C72 H95 Cl N14 O14 . C2 H F3 O2

SR CA

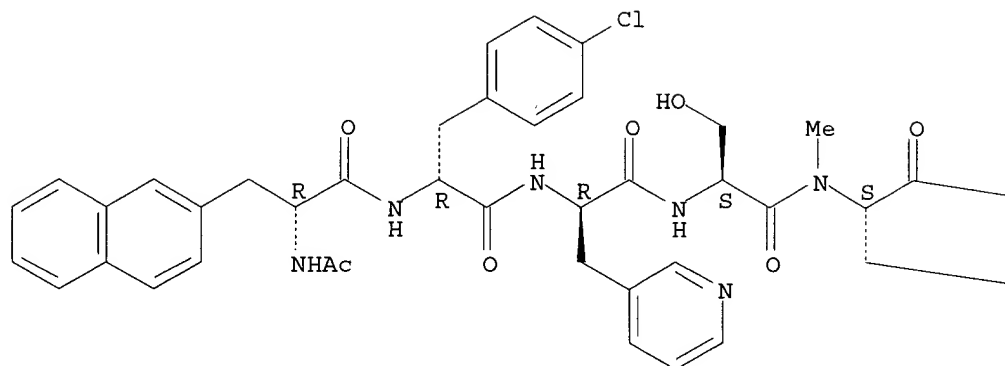
LC STN Files: CA, CAPLUS

CM 1

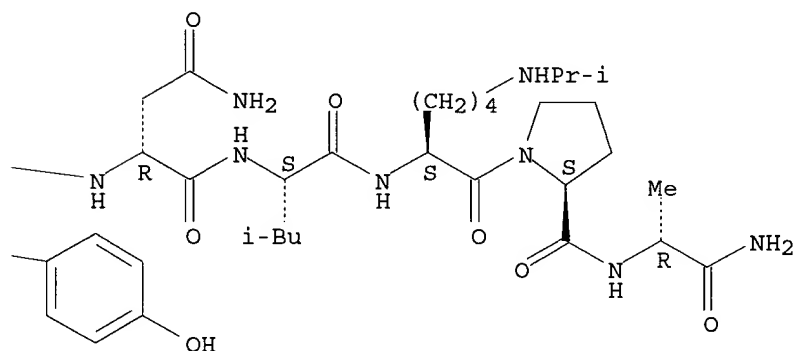
CRN 183552-38-7  
CMF C72 H95 Cl N14 O14

Absolute stereochemistry.

PAGE 1-A

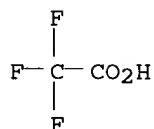


PAGE 1-B



CM 2

CRN 76-05-1  
CMF C2 H F3 O2



1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:152828

L23 ANSWER 6 OF 15 REGISTRY COPYRIGHT 1997 ACS  
RN 186837-35-4 REGISTRY  
CN D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-

phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-L-tyrosyl-3-(1-oxido-3-pyridinyl)-D-alanyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl-,  
mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified (modifications unspecified)

type	-----	location	-----	description
stereo		Ala-10	-	D

SEQ 1 AFASYALKPA

=====

HITS AT: 1-10

MF C75 H95 Cl N14 O14 . C2 H F3 O2

SR CA

LC STN Files: CA, CAPLUS

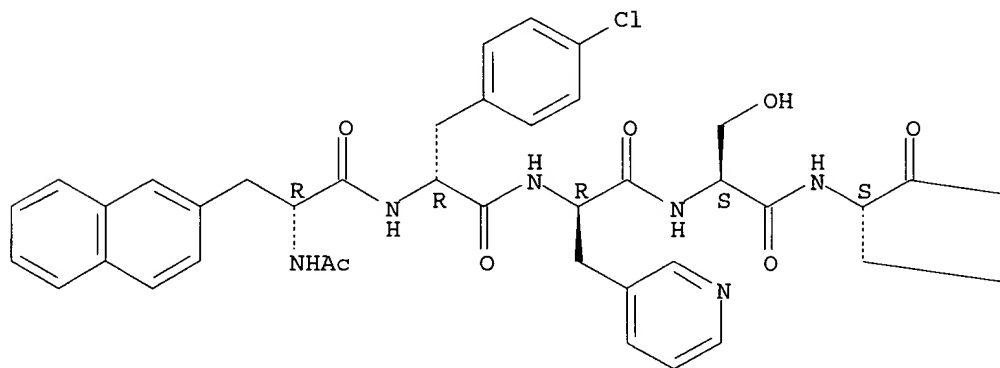
CM 1

CRN 186837-34-3

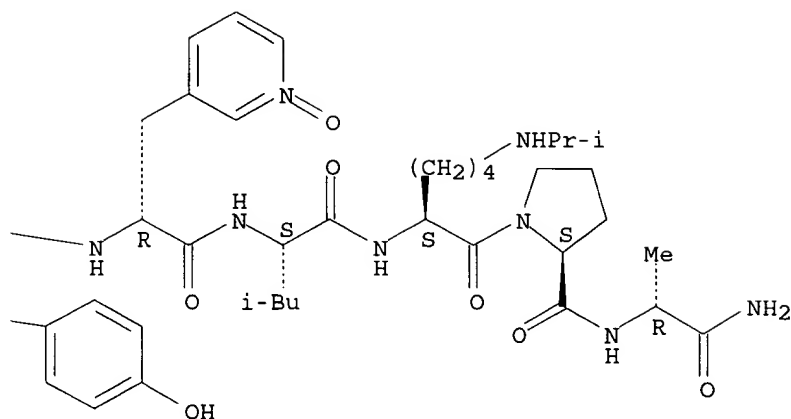
CMF C75 H95 Cl N14 O14

Absolute stereochemistry.

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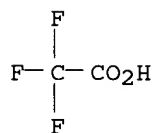
PAGE 1-B



CM 2

CRN 76-05-1

CMF C2 H F3 O2



1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:152828

L23 ANSWER 7 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN 186837-34-3 REGISTRY

CN D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-L-tyrosyl-3-(1-oxido-3-pyridinyl)-D-alanyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl-(9CI) (CA INDEX NAME)

FS 3D CONCORD; PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified (modifications unspecified)

type	location	description
stereo	Ala-10	D

SEQ 1 AFASYALKPA

=====

HITS AT: 1-10

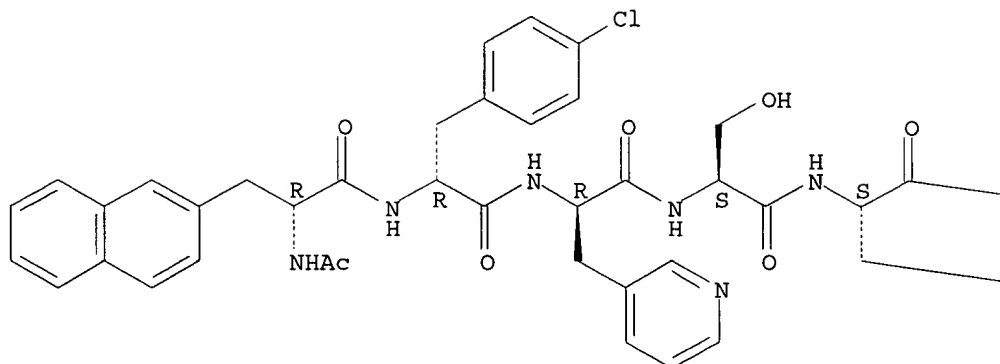
MF C75 H95 Cl N14 O14

CI COM

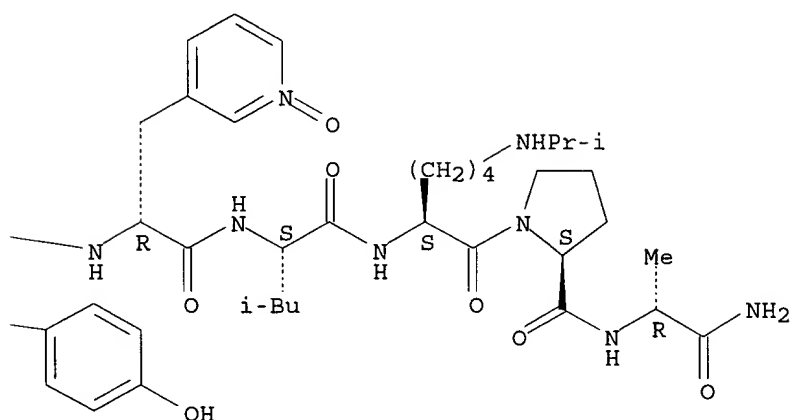
SR CA

Absolute stereochemistry.

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L23 ANSWER 8 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN 186837-22-9 REGISTRY

CN D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-L-tyrosyl-3-[1-(carboxymethyl)pyridinium-3-yl]-D-alanyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl-, salt with trifluoroacetic acid (1:1) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified (modifications unspecified)

type	location	description
stereo	Ala-10	D

SEQ 1 AFASYALKPA

=====

HITS AT: 1-10

MF C77 H98 Cl N14 O15 . C2 F3 O2

SR CA

LC STN Files: CA, CAPLUS

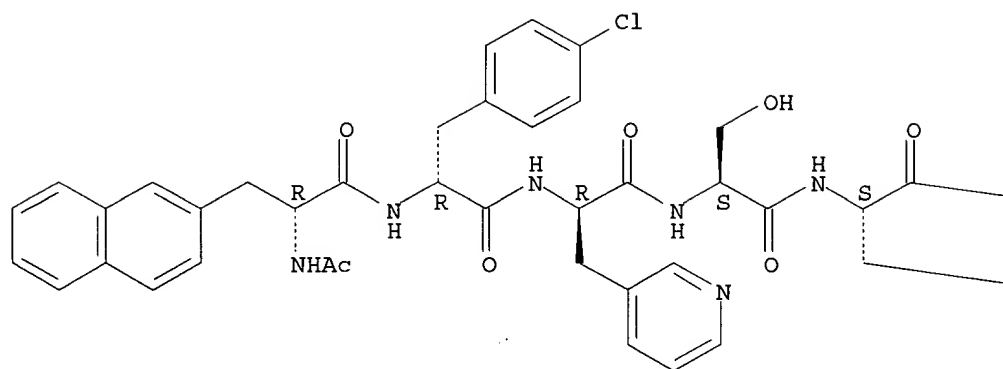
CM 1

CRN 186837-21-8

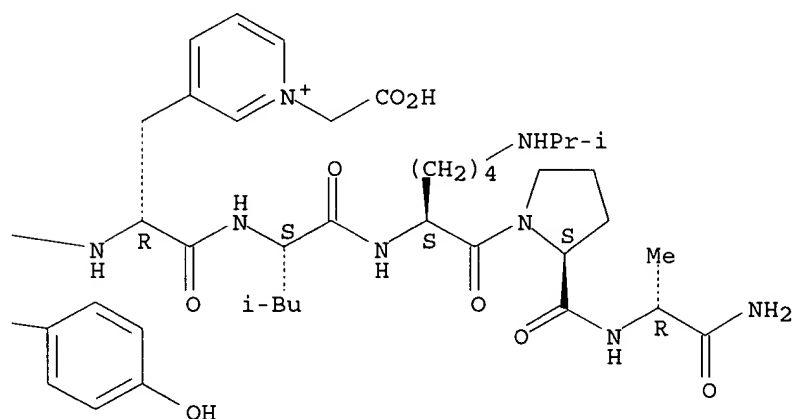
CMF C77 H98 Cl N14 O15

Absolute stereochemistry.

PAGE 1-A



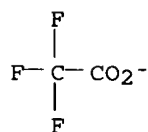
PAGE 1-B



CM 2

CRN 14477-72-6

CMF C2 F3 O2



## 1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:152828

L23 ANSWER 9 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN 186837-21-8 REGISTRY

CN D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-L-tyrosyl-3-[1-(carboxymethyl)pyridinium-3-yl]-D-alanyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl- (9CI) (CA INDEX NAME)

FS 3D CONCORD; PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified (modifications unspecified)

type	location	description
stereo	Ala-10	- D

SEQ 1 AFASYALKPA

=====

HITS AT: 1-10

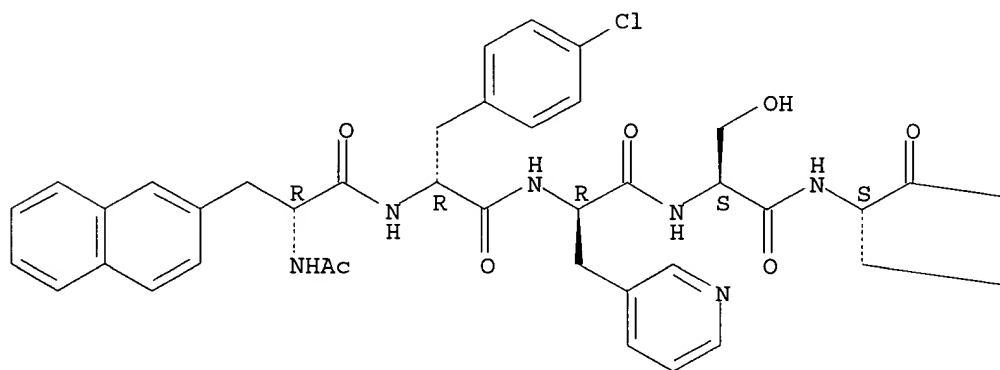
MF C77 H98 Cl N14 O15

CI COM

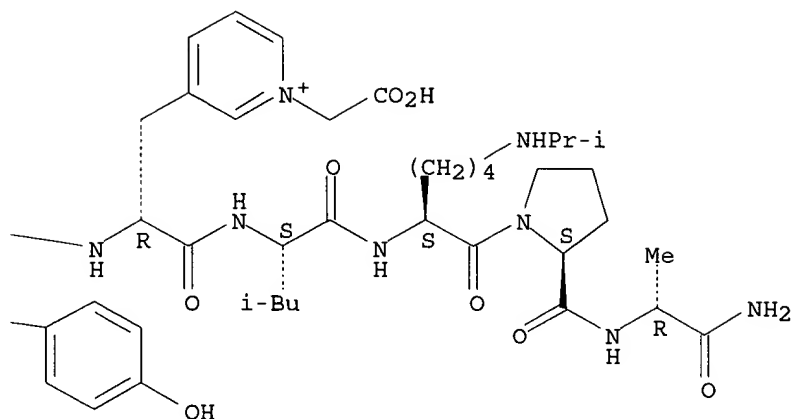
SR CA

Absolute stereochemistry.

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PAGE 1-B



L23 ANSWER 10 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN . 186837-15-0 REGISTRY

CN D-Alaninamide, N-acetyl-N-methylglycyl-4-chloro-D-phenylalanyl-3-(2-naphthalenyl)-D-alanyl-L-seryl-L-tyrosyl-3-[1-(phenylmethyl)pyridinium-3-yl]-D-alanyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl- (9CI) (CA INDEX NAME)

FS 3D CONCORD; PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified (modifications unspecified)

type	location		description
uncommon	Sar-1	-	-
stereo	Ala-10	-	D

SEQ 1 XFASYALKPA

=====

HITS AT: 1-10

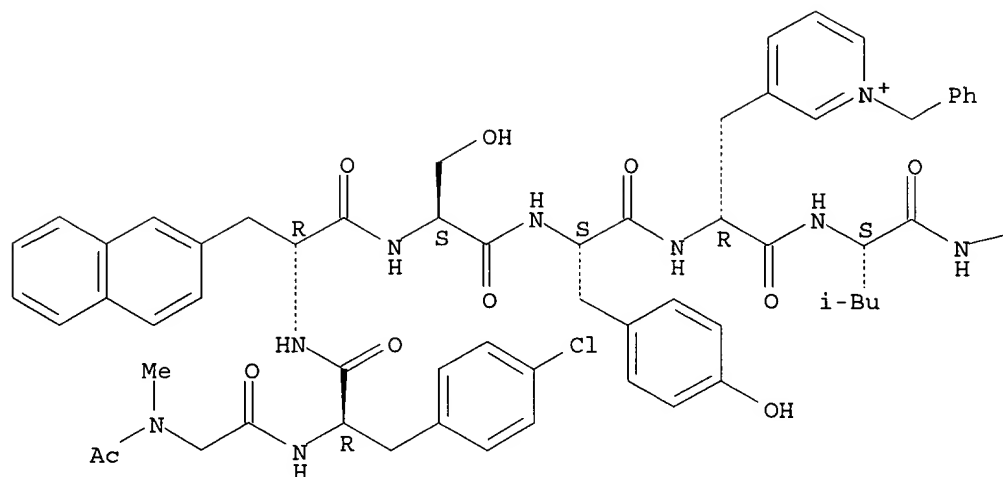
MF C77 H99 Cl N13 O13

CI COM

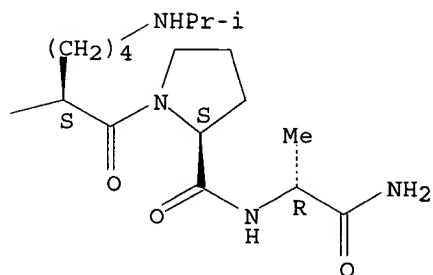
SR CA

Absolute stereochemistry.

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L23 ANSWER 11 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN 186835-69-8 REGISTRY

CN D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-L-tyrosyl-D-asparaginyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified

type	-----	location	-----	description
terminal mod.	Ala-1	-		N-acetyl
terminal mod.	Ala-10	-		C-terminal amide
modification	-	-		undetermined modification
modification	Ala-1	-		2-naphthalenyl<2-Naph>
modification	Phe-2	-		chloro<Cl>
modification	Ala-3	-		3-pyridinyl<3Py>
modification	Lys-8	-		1-methylethyl<i-Pr>

SEQ 1 AFASYNLKPA

=====

HITS AT: 1-10

MF C71 H93 Cl N14 O14 . C2 H F3 O2

SR CA

LC STN Files: CA, CAPLUS

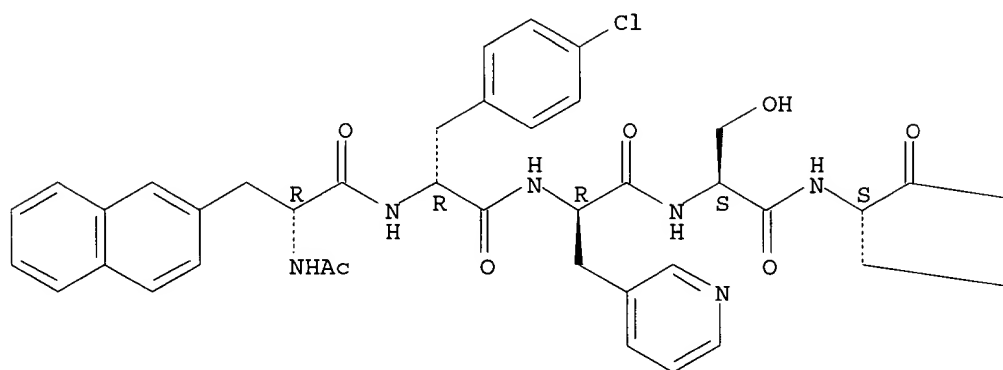
CM 1

CRN 186835-68-7

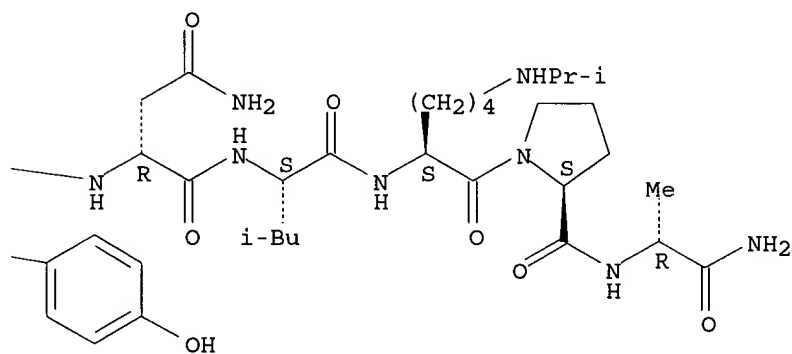
CMF C71 H93 Cl N14 O14

Absolute stereochemistry.

PAGE 1-A



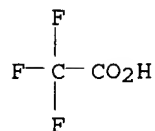
PAGE 1-B



CM 2

CRN 76-05-1

CMF C2 H F3 O2



1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:152828

L23 ANSWER 12 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN 186835-68-7 REGISTRY

CN D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-L-tyrosyl-D-asparaginyll-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl- (9CI) (CA INDEX NAME)

FS 3D CONCORD; PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified

type	location		description
terminal mod.	Ala-1	-	N-acetyl
terminal mod.	Ala-10	-	C-terminal amide
modification	Ala-1	-	2-naphthalenyl<2-Naph>
modification	Phe-2	-	chloro<Cl>
modification	Ala-3	-	3-pyridinyl<3Py>
modification	Lys-8	-	1-methylethyl<i-Pr>

SEQ 1 AFASYNLKPA

=====

HITS AT: 1-10

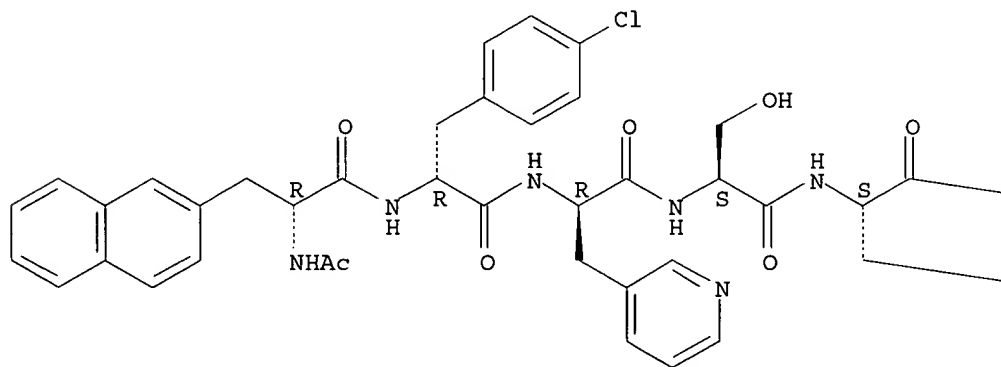
MF C71 H93 Cl N14 O14

CI COM

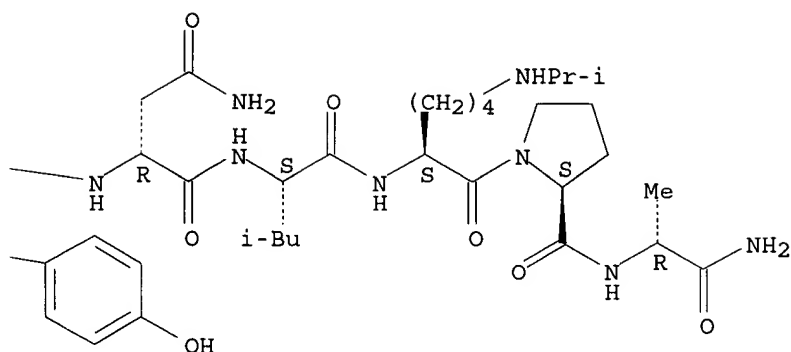
SR CA

Absolute stereochemistry.

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L23 ANSWER 13 OF 15 REGISTRY COPYRIGHT 1997 ACS  
 RN 184679-82-1 REGISTRY  
 CN **D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-L-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-L-tyrosyl-3-[1-(carboxymethyl)pyridinium-3-yl]-D-alanyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl-, inner salt (9CI)** (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 SQL 10  
 NTE modified (modifications unspecified)

SEQ 1 AFASYALKPA

=====

HITS AT: 1-10

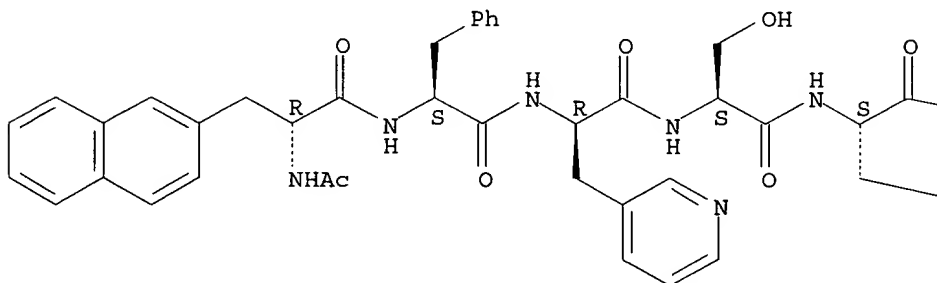
MF C77 H98 N14 O15

SR CA

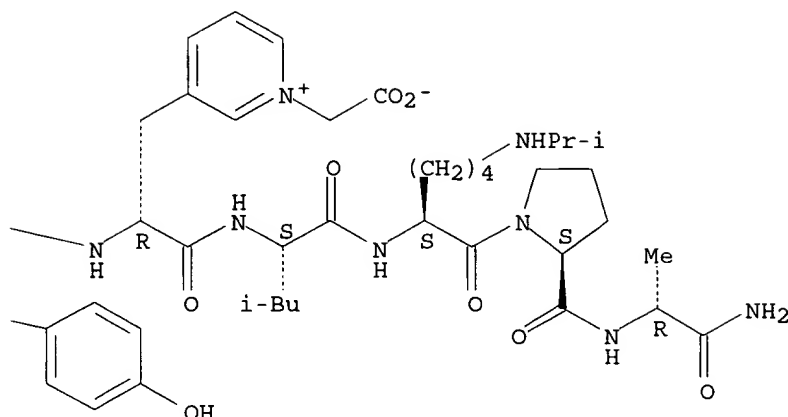
LC STN Files: CA, CAPLUS, TOXLIT

Absolute stereochemistry.

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1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:26943

L23 ANSWER 14 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN 183552-38-7 REGISTRY

CN D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-N-methyl-L-tyrosyl-D-asparaginyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl- (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified

type	location		description
terminal mod.	Ala-1	-	N-acetyl
terminal mod.	Ala-10	-	C-terminal amide
modification	Ala-1	-	2-naphthalenyl<2-Naph>
modification	Phe-2	-	chloro<Cl>
modification	Ala-3	-	3-pyridinyl<3Py>
modification	Tyr-5	-	methyl<Me>
modification	Lys-8	-	1-methylethyl<i>-Pr>

SEQ 1 AFASYNLKPA

11 12 13 14 15 16 17 18 19 20

HITS AT: 1-10

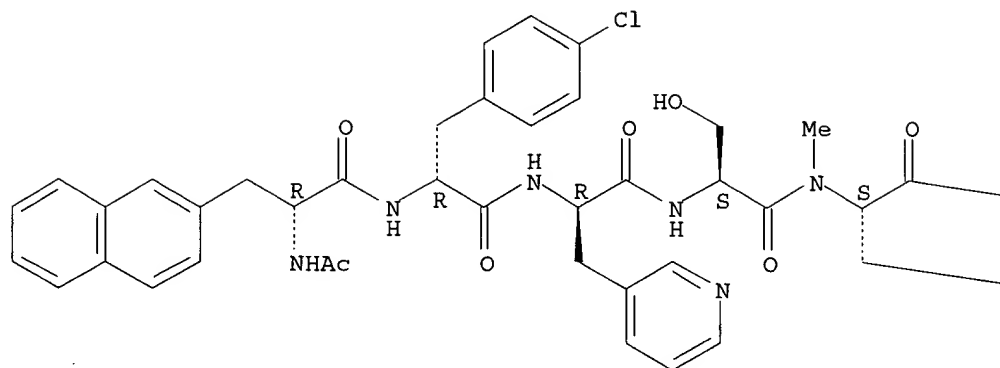
MF C72 H95 C1 N14 O14

CI      COM

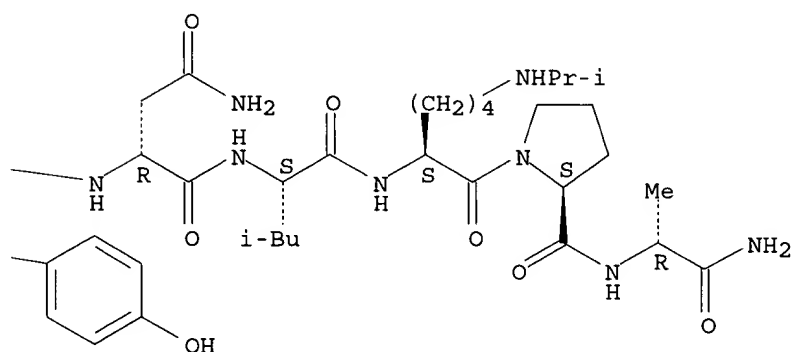
SR CAS Registry Services

Absolute stereochemistry.

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L23 ANSWER 15 OF 15 REGISTRY COPYRIGHT 1997 ACS

RN 155944-29-9 REGISTRY

CN D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-L-tyrosyl-N6-L-histidyl-D-lysyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl- (9CI)  
(CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 11,10,1

NTE multichain  
modified

type	-----	location	-----	description
terminal mod.	Ala-1	-		N-acetyl
terminal mod.	Ala-10	-		C-terminal amide
bridge	Lys-6	- His-1'		amide bridge
stereo	Ala-1	-		D
stereo	Ala-3	-		D
stereo	Lys-6	-		D
stereo	Ala-10	-		D

SEQ 1 AFASYKLKPA

=====

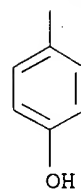
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SEQ      1 H
MF      C79 H106 Cl N17 O14
SR      CA
LC      STN Files:    CA, CAPLUS, TOXLIT

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PAGE 2-A



1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 121:27074

=> fil reg

FILE 'REGISTRY' ENTERED AT 15:51:44 ON 02 JUN 1997  
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STRUCTURE FILE UPDATES: 1 JUNE 97 HIGHEST RN 189261-10-7  
DICTIONARY FILE UPDATES: 1 JUNE 97 HIGHEST RN 189357-16-2

TSCA INFORMATION NOW CURRENT THROUGH DECEMBER 1996

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

=> d stat que l28

L28 6 SEA FILE=REGISTRY ABB=ON PLU=ON (EHWSYGLRPG)/SQEP

=> d his l28-

(FILE 'REGISTRY' ENTERED AT 15:48:57 ON 02 JUN 1997)

SAV L27 BORIN480A/A

SAV L23 BORIN480B/A

E EHWSYGLRPG/SQEP

L28 6 S E3

FILE 'HCAOLD' ENTERED AT 15:51:10 ON 02 JUN 1997

L29 0 S L28

FILE 'HCAPLUS' ENTERED AT 15:51:14 ON 02 JUN 1997

L30 24 S L28

FILE 'USPATFULL' ENTERED AT 15:51:18 ON 02 JUN 1997

L31 2 S L28

FILE 'HCAPLUS, USPATFULL' ENTERED AT 15:51:33 ON 02 JUN 1997

L32 26 DUP REM L30 L31 (0 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 15:51:44 ON 02 JUN 1997

=> d l28 1- sqide can

L28 ANSWER 1 OF 6 REGISTRY COPYRIGHT 1997 ACS

RN 179484-74-3 REGISTRY

CN Luteinizing hormone-releasing factor (pig), 1-(N-acetyl-L-glutamic  
acid)- (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified

type	location		description
terminal mod.	Glu-1	-	N-acetyl
terminal mod.	Gly-10	-	C-terminal amide

SEQ 1 EHWSYGLRPG

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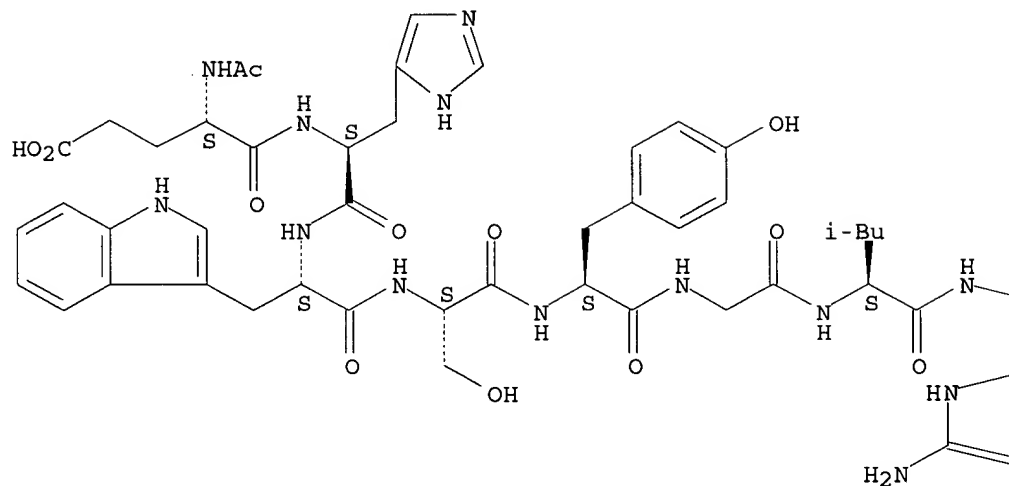
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MF C57 H79 N17 O15

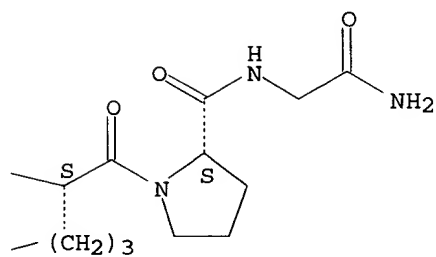
SR CA  
 LC STN Files: CA, CAPLUS, TOXLIT

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



4 REFERENCES IN FILE CA (1967 TO DATE)  
 4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:148362

REFERENCE 2: 126:42773

REFERENCE 3: 125:204199

REFERENCE 4: 125:123469

L28 ANSWER 2 OF 6 REGISTRY COPYRIGHT 1997 ACS  
 RN 138971-61-6 REGISTRY

CN Luteinizing hormone-releasing factor (pig), 1-[N-[(1,1-dimethylethoxy)carbonyl]-L-glutamic acid]-, 1,1-dimethylethyl ester, acetate (2:3) (salt) (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 SQL 10  
 NTE modified

type	location		description
terminal mod.	Gly-10	-	C-terminal amide
modification	-	-	undetermined modification
modification	Glu-1	-	(1,1-dimethylethoxy) carbonyl<Boc>
modification	Glu-1	-	1,1-dimethylethyl<t-Bu>

SEQ 1 EHWSYGLRPG

=====

HITS AT: 1-10

MF C64 H93 N17 O16 . 3/2 C2 H4 O2

SR CA

LC STN Files: BEILSTEIN\*, CA, CAPLUS  
 (\*File contains numerically searchable property data)

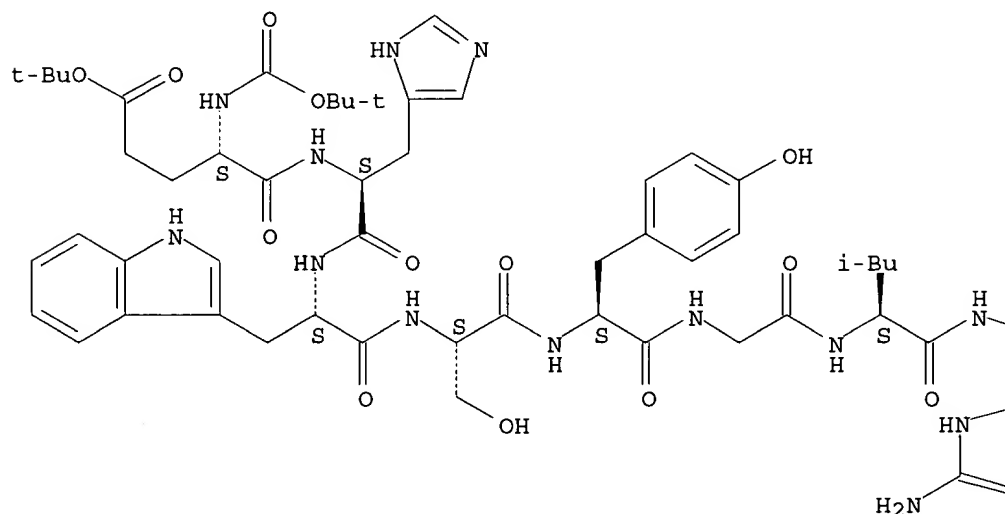
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CRN 138971-60-5

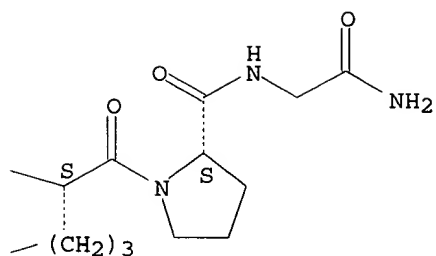
CMF C64 H93 N17 O16

Absolute stereochemistry.

PAGE 1-A



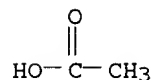
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CM 2

CRN 64-19-7

CMF C2 H4 O2



1 REFERENCES IN FILE CA (1967 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 117:27101

L28 ANSWER 3 OF 6 REGISTRY COPYRIGHT 1997 ACS

RN 138971-60-5 REGISTRY

CN Luteinizing hormone-releasing factor (pig), 1-[N-[(1,1-dimethylethoxy)carbonyl]-L-glutamic acid]-, 1,1-dimethylethyl ester  
 (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified

type	location		description
terminal mod.	Gly-10	-	C-terminal amide
modification	Glu-1	-	(1,1-dimethylethoxy) carbonyl<Boc>
modification	Glu-1	-	1,1-dimethylethyl<t-Bu>

SEQ 1 EHWSYGLRPG

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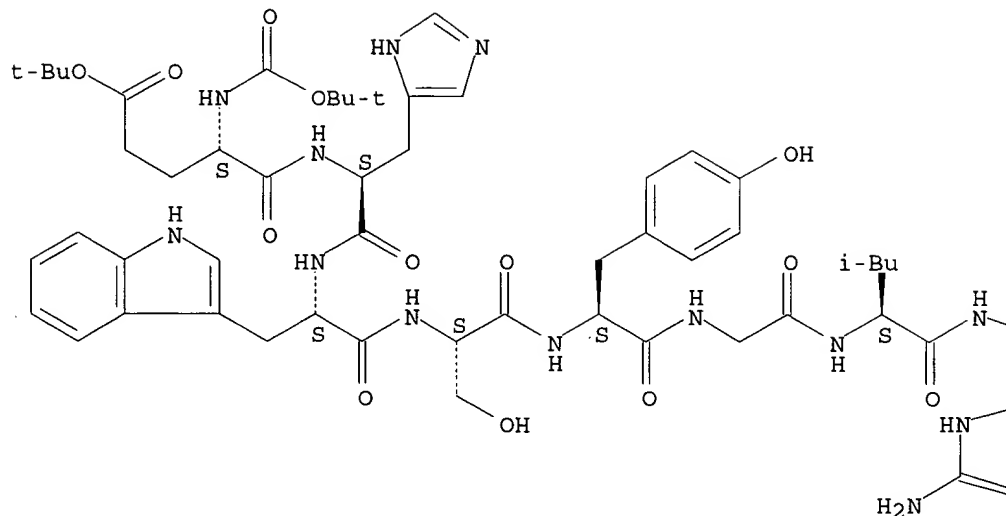
HITS AT: 1-10

MF C64 H93 N17 O16

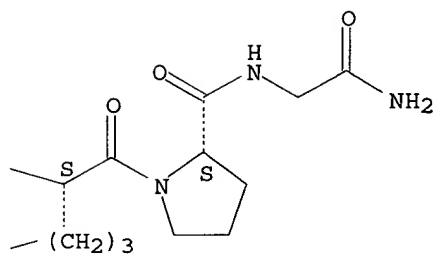
CI COM  
SR CA

Absolute stereochemistry.

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=NH

L28 ANSWER 4 OF 6 REGISTRY COPYRIGHT 1997 ACS

RN 60556-70-9 REGISTRY

CN Luteinizing hormone-releasing factor (pig), 1-L-glutamic  
acid-10-glycine- (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

SEQ 1 EHWSYGLRPG

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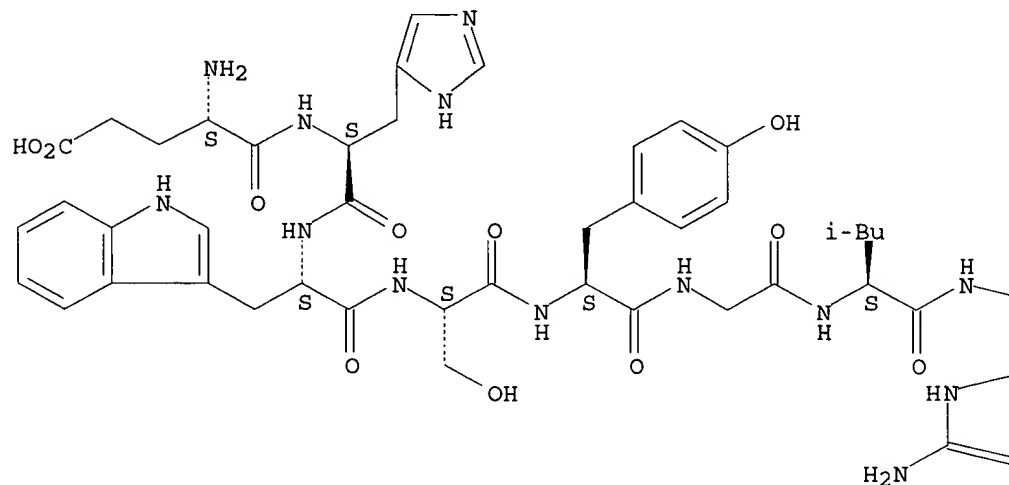
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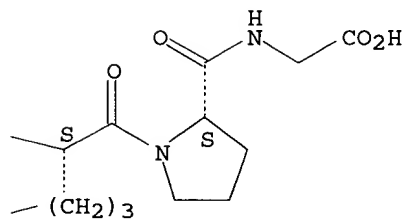
LC STN Files: BEILSTEIN\*, CA, CAPLUS, TOXLIT, USPATFULL  
 (\*File contains numerically searchable property data)

Absolute stereochemistry.

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PAGE 1-B



10 REFERENCES IN FILE CA (1967 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 10 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:72308  
 REFERENCE 2: 122:131007  
 REFERENCE 3: 121:199201  
 REFERENCE 4: 120:189667

REFERENCE 5: 116:144831

REFERENCE 6: 116:100646

REFERENCE 7: 110:112726

REFERENCE 8: 105:151140

REFERENCE 9: 105:132044

REFERENCE 10: 85:121509

L28 ANSWER 5 OF 6 REGISTRY COPYRIGHT 1997 ACS

RN 47924-54-9 REGISTRY

CN Luteinizing hormone-releasing factor (pig), 1-L-glutamic acid- (9CI)  
(CA INDEX NAME)

OTHER NAMES:

CN [Glu1]LH-RH

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 10

NTE modified

type	location	description
terminal mod.	Gly-10	C-terminal amide

SEQ 1 EHWSYGLRPG

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MF C55 H77 N17 O14

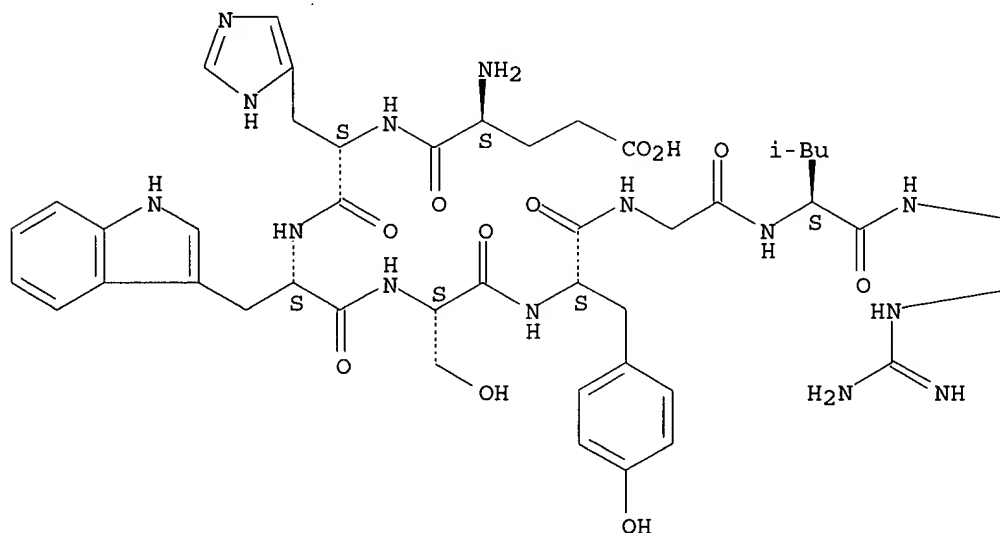
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LC STN Files: BEILSTEIN\*, CA, CAPLUS, TOXLIT

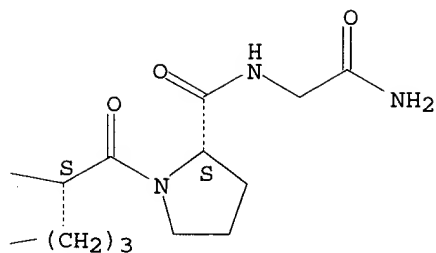
(\*File contains numerically searchable property data)

Absolute stereochemistry.

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PAGE 1-B



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REFERENCE 1: 122:56533  
 REFERENCE 2: 120:46108  
 REFERENCE 3: 117:27101  
 REFERENCE 4: 116:144831  
 REFERENCE 5: 111:195370  
 REFERENCE 6: 111:109751  
 REFERENCE 7: 108:204858  
 REFERENCE 8: 105:151140  
 REFERENCE 9: 103:116578  
 REFERENCE 10: 94:58576

L28 ANSWER 6 OF 6 REGISTRY COPYRIGHT 1997 ACS  
 RN 40489-54-1 REGISTRY  
 CN Luteinizing hormone-releasing factor (pig), 1-L-glutamic acid-,  
 triacetate (salt) (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 SQL 10  
 NTE modified

type	location	description
terminal mod.	Gly-10	C-terminal amide
modification	-	undetermined modification

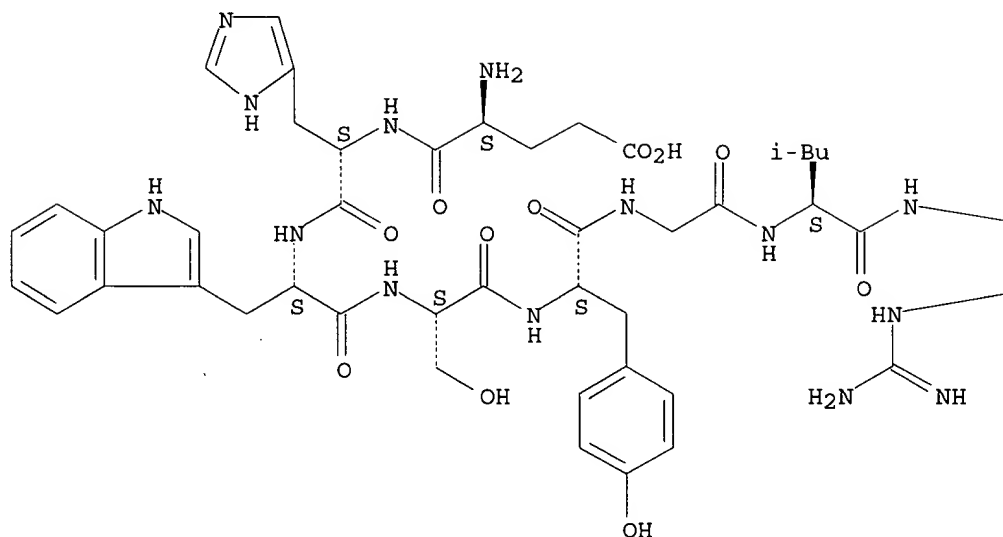
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 LC STN Files: CA, CAPLUS

CM 1

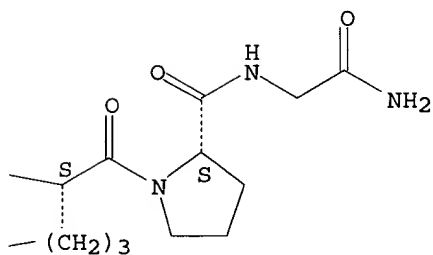
CRN 47924-54-9  
CMF C55 H77 N17 O14

Absolute stereochemistry.

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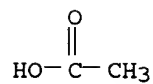


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CM 2

CRN 64-19-7  
CMF C2 H4 O2



1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 78:124875

=> fil hcaplus uspatful

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=> d bib abs hitrn 1-

L32 ANSWER 1 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1997:61234 HCAPLUS

DN 126:72308

TI Methods and apparatus for sequencing polymers with a statistical certainty using mass spectrometry

IN Patterson, Dale H.; Tarr, George E.

PA Perseptive Biosystems, Inc., USA

SO PCT Int. Appl., 86 pp.

CODEN: PIXXD2

PI WO 9636986 A1 961121

DS W: JP

RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AI WO 96-US7146 960517

PRAI US 95-446055 950519

US 95-447175 950519

DT Patent

LA English

AB The method and app. disclosed herein are useful for sequencing polymers, and esp. biopolymers, by mass spectrometry. The methods involve differing ratios of hydrolyzing agent/polymer disposed upon a reaction surface adapted for use with a mass spectrometer. The methods further involve integrating data obtained from mass spectrometry anal. of a plurality of series of hydrolyzed polymer fragments and provide statistical interpretation paradigms and computer software therefor. The app. involves a mass spectrometer sample holder, having hydrolyzing agent disposed thereon, which is useful for adapting any mass spectrometer for polymer sequencing.

IT **60556-70-9**

RL: PRP (Properties)

(biopolymer sequencing by mass spectrometry methods and app.)

L32 ANSWER 2 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1996:459433 HCAPLUS

DN 125:204199

TI Oral absorption studies of lipid-polylysine conjugates of thyrotropin releasing hormone (TRH1) and luteinizing hormone releasing hormone (LHRH1)

AU Flinn, Nicholas; Hussain, Ishfaq; Shaw, Andrew; Artursson, Per; Gibbons, William A.; Toth, Istvan

CS The School of Pharmacy, University of London, 29-39 Brunswick Square, London, WC1N 1AX, UK

SO Int. J. Pharm. (1996), 138(2), 167-174

CODEN: IJPHDE; ISSN: 0378-5173

DT Journal

LA English

AB Lipoamino acids and their oligomers provide an excellent means of enhancing peptide lipophilicity and also helping to increase the

stability of the peptide and protect it from enzymic degrdn. TSH releasing hormone (TRH) and LH releasing hormone (LHRH) were extended on the N-terminal with one and two lipoamino acids and labeled with the 3H-acetyl group. TRH and LHRH conjugates were also prepd. where the compds. were extended with two lipoamino acids, a polylysine unit and the N-terminal labeled with the 3H-acetyl group. The higher lipophilicity resulted in a higher Caco-2 cell assocn. and also a higher rate of oral uptake. The addn. of the polylysine system increased the water soly., as well as the oral uptake of the conjugates. The conjugates developed have been absorbed and detected after oral administration and appear to be stable for a considerable time in vivo.

IT **179484-74-3**

RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(oral absorption of lipid-polylysine conjugates of TRH and LHRH)

L32 ANSWER 3 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1996:695833 HCAPLUS

DN 126:42773

TI Oral absorption studies of lipidic conjugates of thyrotropin releasing hormone (TRH) and luteinizing hormone releasing hormone (LH RH)

AU Flinn, N.; Coppard, S.; Gibbons, W. A.; Shaw, A.; Artursson, P.; Toth, I.

CS School Pharmacy, University London, London, WC1N 1AX, UK

SO Pept.: Chem., Struct. Biol., Proc. Am. Pept. Symp., 14th (1996), Meeting Date 1995, 165-167. Editor(s): Kaumaya, Pravin T. P.; Hodges, Robert S. Publisher: Mayflower Scientific, Kingswinford, UK. CODEN: 63NTAF

DT Conference

LA English

AB Oral absorption was studied for TRH and LH-RH chem. modified by conjugation to a novel class of compds., the lipoamino acids and their homo-oligomers, the lipopeptides. Studies were carried out using Caco-2 cells and radiolabeled analogs in rats. Results suggest that addn. of lipoamino acids to poorly absorbed peptides is a viable way of increasing oral uptake. The bifunctional nature of the lipidic units allows them to confer hydrophobicity, thus allowing uptake through the gut epithelium. The lipidic moiety also protects the peptides from enzymic degrdn.

IT **179484-74-3**

RL: BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)  
(Oral absorption studies of lipidic conjugates of TSH releasing hormone (TRH) and LH releasing hormone (LH RH))

L32 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1997:91318 HCAPLUS

DN 126:148362

TI Oral absorption studies of lipid-polylysine conjugates of thyrotropin releasing hormone (TRH1) and luteinizing hormone releasing hormone (LHRH1). [Erratum to document cited in CA125:204199]

AU Flinn, Nicholas; Hussain, Ishfaq; Shaw, Andrew; Artursson, Per; Gibbons, William A.; Toth, Istvan

CS The School of Pharmacy, University of London, London, WC1N 1AX, UK

SO Int. J. Pharm. (1996), 143(1), 125-134

CODEN: IJPHDE; ISSN: 0378-5173

DT Journal  
LA English  
AB The publisher printed the wrong p. 171. The entire article is reprinted here for completeness. The errors were not reflected in the abstr. or the index entries.  
IT **179484-74-3**  
RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(oral absorption of lipid-polylysine conjugates of TRH and LHRH (Erratum))

L32 ANSWER 5 OF 26 HCAPLUS COPYRIGHT 1997 ACS  
AN 1996:433541 HCAPLUS  
DN 125:123469  
TI Oral absorption studies of lipidic conjugates of thyrotropin releasing hormone (TRH) and luteinizing hormone-releasing hormone (LHRH)  
AU Flinn, Nicholas; Coppard, Steve; Toth, Istvan  
CS Sch. Pharmacy, Univ. London, London, WC1N 1AX, UK  
SO Int. J. Pharm. (1996), 137(1), 33-39  
CODEN: IJPHDE; ISSN: 0378-5173

DT Journal  
LA English  
AB The lipoamino acids and their oligomers provide an excellent means of enhancing peptide lipophilicity and also increase the biol. stability of the peptide by protecting it from enzymic degrdn. The enzymically labile peptides TRH and LHRH were conjugated to lipoamino acids and lipopeptides. The conjugates were labeled on the N-terminal with a [3H]acetyl group, administered orally to rats and the uptake examd. A high level of radiolabel uptake was obsd. in the blood, liver, spleen, kidneys, small intestine and large intestine after oral administration. In general the uptake of tripeptide TRH analogs was higher than the decapeptide LHRH analogs. Within the same series, conjugates with two lipidic moieties showed higher uptake than the conjugates with one lipidic unit. The novel conjugates developed have been absorbed and detected after oral administration and appear to be stable for a considerable time in vivo.  
IT **179484-74-3**  
RL: BOC (Biological occurrence); BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)  
(oral absorption of lipidic conjugates of TRH and LHRH)

L32 ANSWER 6 OF 26 USPATFULL  
AN 95:29393 USPATFULL  
TI LHRH-TraTp fusion proteins  
IN Russell-Jones, Gregory J., Middle Cove, Australia  
Stewart, Andrew G., Pymble, Australia  
Tsonis, Con G., Denistone, Australia  
PA Biotechnology Australia Ptl Ltd., Roseville, Australia (non-U.S. corporation)  
PI US 5403586 950404  
WO 9102799 910307  
AI US 91-690983 910625 (7)  
WO 90-AU373 900824  
910625 PCT 371 date  
910625 PCT 102(e) date  
PRAI AU 89-5979 890825

DT Utility  
EXNAM Primary Examiner: Draper, Garnette D.; Assistant Examiner:  
Spector, L.  
LREP Foley & Lardner  
CLMN Number of Claims: 17  
ECL Exemplary Claim: 1  
DRWN 19 Drawing Figure(s); 15 Drawing Page(s)  
LN.CNT 1491

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to the preparation of novel fusion proteins which comprise an analogue of LHRH and TraTp or an analogue of TraTp. The fusion proteins of the invention are useful as components of vaccines for the inhibition or control of reproductive functions in vertebrate hosts. The invention also relates to polynucleotide molecules encoding the fusion proteins, to transformant hosts expressing the fusion proteins and to methods of inhibiting or controlling reproductive function in vertebrate hosts using the fusion proteins or vaccines of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **60556-70-9**  
(amino acid sequence of)

L32 ANSWER 7 OF 26 HCAPLUS COPYRIGHT 1997 ACS  
AN 1995:340887 HCAPLUS  
DN 122:131007  
TI Immunogenic LHRH peptide constructs and synthetic universal immune stimulators for vaccines  
IN Ladd, Anna E.; Wang, Chang Yi; Zamb, Timothy  
PA USA  
SO PCT Int. Appl., 217 pp.  
CODEN: PIXXD2  
PI WO 9425060 A1 941110  
DS W: AU, CA, FI, JP, KR, NO, US  
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  
AI WO 94-US4832 940428  
PRAI US 93-57166 930427  
US 94-229275 940414  
DT Patent  
LA English  
AB This invention relates to immunogenic LH releasing hormone (LHRH) peptides that lead to suppression of LHRH activity in males or females. When male rats are immunized with these peptides, serum testosterone drops and androgen-dependent organs atrophy significantly. These peptides are useful for inducing infertility and for treating prostatic hyperplasia, androgen-dependent carcinoma, prostatic carcinoma and testicular carcinoma in males. In females, the peptides are useful for treating endometriosis, benign uterine tumors, recurrent functional ovarian cysts and (severe) premenstrual syndrome as well as prevention or treatment of estrogen-dependent breast cancer. The subject peptides contain a helper T cell epitope and have LHRH at the C terminus. The helper T cell epitope aids in stimulating the immune response against LHRH. The peptides, optionally contain an invasin domain which acts as a general immune stimulator. In another aspect this invention relates to immunogenic synthetic peptides having an invasin domain, a helper T cell epitope and a peptide hapten and methods of using these peptides to treat disease or provide protective immunity. The

peptide haptens of the invention include LHRH, amylin, gastrin, gastrin releasing peptide, IgE CH4 peptide, Chlamydia MOMP peptides, HIV V3 peptides and Plasmodium berghei.

IT 60556-70-9

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(immunogenic constructs contg. helper T cell epitope fused to  
LHRH and synthetic universal immune stimulators for vaccines)

L32 ANSWER 8 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1994:599201 HCAPLUS

DN 121:199201

TI Substrate phosphorylation capacities of the major tyrosine protein kinase from the human promyelocytic cell line, HL-60

AU Ernould, Anne-Pascale; Ferry, Gilles; Barret, Jean-Marc; Genton, Annie; Boutin, Jean A.

CS Dep. Exp. Oncol., Servier Res. Inst., Suresnes, Fr.

SO Int. J. Pept. Protein Res. (1994), 43(5), 496-504

CODEN: IJPPC3; ISSN: 0367-8377

DT Journal

LA English

AB The major tyrosine protein kinase, HPK40, isolated from HL-60, the prepn. of which is described elsewhere (Ernould, A. P., Ferry, G., Barret, J. M., Genton, A. and Boutin, J. A., Eur. J. Biochem., 214, 503-514), was investigated as to its specificity on a no. of peptides and proteins. It was found that HPK40 can phosphorylate histones (except histone H4), casein, acid-treated enolase, actin and tubulin but not calmodulin. Phosphorylation specificity of HPK40 was investigated using over a hundred peptidic structures. HPK40 is not related to the 'src' family and does not phosphorylate efficiently either the tetrapeptide NEYT derived from the pp60src auto-phosphorylation domain or the corresponding peptide RRsrc, RRLIED-NEYTARG. VALYDYESR from the SH3 domain of pp60c-src is recognized as a substrate with a high phosphorylation level. DEDYIQD, derived from the phosvitin/casein kinase II, was also highly phosphorylated. In order to det. the minimal recognition sequence of HPK40, the phosphorylation of about 60 dito tetrapeptides was investigated. Some of the tetrapeptides, such as \*EEYE and NEYE, were well phosphorylated. Even some tripeptides, such as EYE, DYM, TYS and KYE, were recognized by HPK40, while none of the tested dipeptides was recognized as substrate. Sequences of peptides from DRVYHPF (angiotensin), LEEEEAYGWMD (minigastrin) and QEEYSAM (from H-ras1) were examd. as substrates. The presence of one or several acidic residues on the N.alpha.-side of tyrosine residue was identified as the only apparently favorable determinant. These results are steps towards the min. recognition sequence, which in turn will serve as a lead for chem. modifications in view of obtaining a specific, low-mol.-wt., inhibitor of this human tyrosine protein kinase.

IT 60556-70-9

RL: BIOL (Biological study)  
(tyrosine protein kinase HLK40 of human promyelocytic cell line  
HL-60 specificity for, structure relation to)

L32 ANSWER 9 OF 26 HCAPLUS COPYRIGHT 1997 ACS

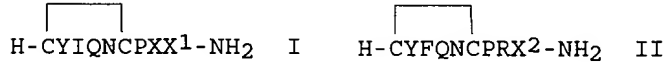
AN 1995:69214 HCAPLUS

DN 122:56533

TI In vitro amidation for preparation of recombinant peptides: enzymic coupling with specific endopeptidases

AU Togame, H.; Inaoka, T.; Kokubo, T.

CS International Res. Lab., Ciba-Geigy Japan Ltd., Takarazuka, 665,  
Japan  
SO Pept.: Chem., Struct. Biol., Proc. Am. Pept. Symp., 13th (1994),  
Meeting Date 1993, 77-9. Editor(s): Hodges, Robert S.; Smith. John  
A. Publisher: ESCOM, Leiden, Neth.  
CODEN: 60LXAW  
DT Conference  
LA English  
GI



AB A symposium report on the prepn. of recombinant peptides via enzymic coupling with specific endopeptidases. Recombinant prolyl endopeptidase was applied to the enzymic coupling of <EHWSYGLRP-OH (<E = pyroglutamic acid) with H-G-NH<sub>2</sub> to give <EHWSYGLRPG-NH<sub>2</sub> (LH-releasing hormone) and the enzymic coupling of cystine peptide I (XX1 = null) with H-LG-NH<sub>2</sub> to give oxytocin I (XX1 = LG). Arginyl endopeptidase was applied to the enzymic coupling of cystine peptide II (X2 = null) with H-G-NH<sub>2</sub> to give vasopressin II (X2 = G).

IT **47924-54-9P**

RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(prepn. of recombinant peptides via enzymic coupling with specific endopeptidases)

L32 ANSWER 10 OF 26 USPATFULL

AN 93:87127 USPATFULL

TI Process for preparing immune complexes

IN Morein, Bror, Ollonstigen 3, Vreta, S-75590 Uppsala, Sweden

PI US 5254339 931019

WO 8702250 870423

AI US 87-70920 870601 (7)

WO 86-SE8700480 861016

870601 PCT 371 date

870601 PCT 102(e) date

PRAI EP 85-850326 851016

DT Utility

EXNAM Primary Examiner: Rosen, Sam

LREP Young & Thompson

CLMN Number of Claims: 19

ECL Exemplary Claim: 1

DRWN 1 Drawing Figure(s); 1 Drawing Page(s)

LN.CNT 1236

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process is provided for preparing an immunogenic complex containing antigenic proteins and peptides with hydrophobic domains, whereby proteins or peptides from viruses, mycoplasmas, bacteria, parasites, animal cells with hydrophobic domains are mixed with one or more solubilizing agents, whereby complexes are formed between proteins or peptides and the solubilizing agent, where after the proteins or peptides are separated from solubilizing agent in the presence of, or are separated from, the solubilizing agent and directly transferred to a glycoside solution, containing one or more glycosides with hydrophobic and

hydrophilic domains in a concentration of at least the critical micellar concentration, thereby forming a protein complex which is isolated and purified, characterized in that lipids are added before the complex is isolated and purified.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 60556-70-9

(carrier-bound, as antigen)

L32 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1994:46108 HCAPLUS

DN 120:46108

TI A novel computer modeling approach to the structures of small bioactive peptides: The structure of gonadotropin releasing hormone

AU Gupta, Hema M.; Talwar, Gursaran P.; Salunke, Dinakar M.

CS Natl. Inst. Immunol., New Delhi, 110 067, India

SO Proteins: Struct., Funct., Genet. (1993), 16(1), 48-56

CODEN: PSFGEY; ISSN: 0887-3585

DT Journal

LA English

AB A novel computer modeling approach suitable for the structure anal. of small bioactive peptides has been developed. This approach involves identification of conformational patterns in protein structure data bank based on the sequence homol. with the bioactive peptide. The models built on the basis of this homol. and having common conformational patterns are analyzed under the structural constraints derived from the activity data of various synthetic analogs of the peptide. Application of this procedure to the gonadotropin-releasing hormone (GnRH) resulted in a library of possible structures for GnRH, 9 among which shared a common .beta.-turn. Further anal. of the structures contg. the .beta.-turn motif, in the context of the structure-activity data, led to a model for the active conformation of GnRH. The topol. of the putative receptor binding site of the hormone is defined by a contiguous surface formed through an appropriate juxtaposition of the N-terminal pGlu1, the guanidyl group of Arg8, arom. side chain of Trp3, and the Gly10-NH2 at the C-terminal end.

IT 47924-54-9

RL: PRP (Properties)

(conformation of, receptor-binding site in relation to)

L32 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1994:189667 HCAPLUS

DN 120:189667

TI Lesions in the hypothalamus after active immunization against GnRH in the pig

AU Molenaar, G.J.; Lugard-Kok, C.; Melen, R.H.; Oonk, R.B.; de Koning, J.; Wensing, C.J.G.

CS Sch. Vet. Med., Univ. Utrecht, Utrecht, 3508 TD, Neth.

SO J. Neuroimmunol. (1993), 48(1), 1-11

CODEN: JNRIDW; ISSN: 0165-5728

DT Journal

LA English

AB The terminals of the hypothalamic gonadotrophin hormone-releasing hormone (GnRH) neurons are located within the median eminence and thereby extend beyond the protection of the blood-brain barrier. Thus, these terminals may be subjected to direct autoimmune action in animals that are actively immunized against GnRH. Boars (male pigs) were actively immunized against GnRH by two successive

injections with synthetic GnRH, covalently coupled to KLH and dissolved in CFA or IFA. They were killed at 26 wk of age. Immunized boars were selected on the basis of the resultant testes size, which indicates the effectiveness of the immunization. The hypothalami of 25 selected animals were studied by histol. and immunocytochem. techniques and compared with the hypothalami of three sham- and nine control animals. In the immunized animals, changes in the GnRH system had taken place. These comprised dystrophy of the perikarya and a sharp decrease of the GnRH immunocytochem. reactivity in the terminals within the median eminence. In addn., various degrees of inflammatory reactions were present, particularly within the median eminence. These consisted of tissue disruption by edema, collapse of the capillaries, fibrosis and infiltration with fibroblasts. In addn., accumulations of neurosecretum within the median eminence in combination with hypertrophy of magnocellular neurons within the hypothalamus were present. The reactions were restricted to the median eminence and did not involve other neurohemal organs or other parts of the hypothalamus. A correlation could be established between the incidence of the lesions and the effectiveness of the GnRH autoimmunity (as indicated by the size and endocrine function of the gonads and the anti-GnRH titers). Changes in extra- and intracellular IgG immunocytochem. reactivity within the median eminence indicated the involvement of IgG. The effects were absent from control and sham vaccinated animals and after vaccinations with other compns. of the vaccine. Thus, hypothalamic lesions have been obsd. in this selected group of animals, vaccinated against GnRH with this particular vaccine.

IT 60556-70-9D, protein conjugates

RL: BIOL (Biological study)

(immunization with, from gonadotrophin hormone-releasing hormone, hypothalamus lesions induction by)

L32 ANSWER 13 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1992:144831 HCAPLUS

DN 116:144831

TI [Hyp9]-LHRH, its derivatives or fragments, and production method and uses as a drug or in an assay

IN Gautron, Jean Pierre; Pattou, Eliane; Kordon, Claude; Bauer, Karl

PA Institut National de la Sante et de la Recherche Medicale (INSERM), Fr.

SO PCT Int. Appl., 84 pp.

CODEN: PIXXD2

PI WO 9116343 A1 911031

DS W: CA, JP, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE

AI WO 91-FR332 910422

PRAI FR 90-5147 900423

DT Patent

LA French

OS MARPAT 116:144831

AB Peptides pyroGlu-His-Trp-Ser-Tyr-X-Leu-Arg-Hyp-Y (X = Gly, D-Ala, D-Ser, D-Trp, D-His; Y = Gly-CONH<sub>2</sub>, ethylamide) (I), which have a substantial sequence analogy with LHRH, are provided, as are fragments of I. The peptides may display agonist or antagonist activity for LHRH and may be used for treating gynecol. or reproductive endocrinol. disorders, gonadal or secondary sexual organ cancers, and psychiatric disorders in part involving behavior disorders leading to sexual aggressiveness. The peptide can also be

used for exploring the hypothalamic-pituitary axis or in RIAs or biol. assay methods for biol. fluids or for tissue biopsy methods. Isolation of [Hyp9]-LHRH from rat hypothalamus, as well as its purifn., sequence detn., and biol. activity are described. Binding sites or receptors binding LHRH and a carboxyl-terminal fragment (4-10) of [Hyp-9]-LHRH were shown not to be the same in the hippocampus.

IT **47924-54-9 60556-70-9**

RL: BIOL (Biological study)  
(antiLHRH antibodies reactivity with)

L32 ANSWER 14 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1992:100646 HCAPLUS

DN 116:100646

TI Fusion proteins of luteinizing hormone releasing hormone and TraT proteinfor use as contraceptive vaccines

IN Russell-Jones, Gregory John; Stewart, Andrew George; Tsonis, Con George

PA Biotechnology Australia Pty. Ltd., Australia

SO PCT Int. Appl., 49 pp.

CODEN: PIXXD2

PI WO 9102799 A1 910307

DS W: AU, CA, JP, US

RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE

AI WO 90-AU373 900824

PRAI AU 89-5979 890825

DT Patent

LA English

AB Fusion proteins of the Escherichia coli TraT gene product and analogs of luteinizing hormone releasing hormones (LHRH) analogs are prepd. to be used as a vaccines to inhibit reprod. in vertebrates. Recombinant plasmids encoding the fusion proteins, with one or more LHRH genes inserted into one or more restriction sites were constructed. The protein purified from the transformants, e.g. E. coli, was formulated with an adjuvant such as saponin for immunizing dogs and mice and their antigenicity was obsd.

IT **60556-70-9**

RL: PRP (Properties)  
(amino acid sequence of)

L32 ANSWER 15 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1992:427101 HCAPLUS

DN 117:27101

TI Synthesis of mammalian gonadoliberein analogs with the N-terminal glutamine or glutamic acid

AU Masiukiewicz, Elzbieta; Rzeszotarska, Barbara; Fortuna, Gabriela; Kochman, Kazimierz

CS Inst. Chem., Pedagog. Univ. Opole, Opole, 45-052, Pol.

SO J. Prakt. Chem. (1991), 333(4), 573-8

CODEN: JPCEAO; ISSN: 0021-8383

DT Journal

LA English

AB The synthesis of two mammalian gonadoliberein analogs H-X-His-Trp-Ser-Tyr-Gly-Leu-Arg-Pro-Gly-NH<sub>2</sub> (X = Gln, Glu) in soln. by the [(2 + 4) + 4] segment coupling method is described.

IT **138971-61-6P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and deblocking of, with hydrogen chloride)

IT **47924-54-9P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L32 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 1997 ACS  
AN 1989:509751 HCAPLUS  
DN 111:109751  
TI Reproductive hormone-specific immunocontraceptives comprising  
antiidiotypic antibodies, their preparation, and methods of using  
them  
IN Grimes, Stephen; Benjamini, Eliezer; Scibienski, Robert J.  
PA Aphton Corp., USA  
SO PCT Int. Appl., 59 pp.  
CODEN: PIXXD2  
PI WO 8808719 A1 881117  
DS W: AU, BB, BG, BR, DK, FI, HU, JP, KP, KR, LK, MC, MG, MW, NO, RO,  
SD, SU  
RW: AT, BE, BJ, CF, CG, CH, CM, DE, FR, GA, GB, IT, LU, ML, MR, NL,  
SE, SN, TD, TG  
AI WO 88-US1541 880504  
PRAI US 87-49170 870512  
DT Patent  
LA English  
AB Antiidiotypic antibodies (AiAbs) formed against anti-reproductive  
hormone Abs and expressing internal images of reproductive hormone  
antigenic determinants are prepd. and used to immunize female or  
male mammals for contraception. Female or male mammals may also be  
passively immunized against .gtoreq.1 reproductive hormone using a  
compn. comprising an effective amt. of Abs against reproductive  
hormones. Mice were immunized against LH-RH coupled to succinylated  
human .gamma.-globulin or to diphtheria toxin. Spleen cells were  
fused with P3 tumor cells using PEG, etc., and hybridomas secreting  
neutralizing Abs specific for LH-RH were selected and cloned.  
Monoclonal anti-LH-RH Abs shown to be contraceptive in mice were  
coupled to keyhole limpet hemocyanin and the conjugates were used to  
immunize mice to induce AiAbs. A 2nd set of hybridomas was produced  
and screened, etc. Rabbits were immunized with mixts. of monoclonal  
AiAbs (contg. .ltoreq.10 individual Abs) in which each was present  
at 10 or 500 .mu.g in Freund's complete adjuvant (1st 2 injections)  
or alum (last 2 injections). The rabbits had anti-LH-RH response.  
IT **47924-54-9DP**, [Glu1]-LH-RH, diphtheria toxoid or  
.gamma.-globulin conjugates  
RL: PREP (Preparation)  
(prepn. of, as immunogens, for prepn. of antiidiotypic antibodies  
for female contraceptive vaccines)

L32 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 1997 ACS  
AN 1989:112726 HCAPLUS  
DN 110:112726  
TI T-immunogenic peptides are constituted of rare sequence patterns.  
Use in the identification of T epitopes in the human  
immunodeficiency virus gag protein  
AU Claverie, Jean Michel; Kourilsky, Philippe; Langlade-Demoyen,  
Pierre; Chalufour-Prochnicka, Ada; Dadaglio, Gilles; Tekai, Fredj;  
Plata, Fernando; Bougueleret, Lydie  
CS Lab. Biol. Immunol. Mol. Retrovirus, Inst. Pasteur, Paris, F-75724,  
Fr.  
SO Eur. J. Immunol. (1988), 18(10), 1547-53  
CODEN: EJIMAF; ISSN: 0014-2980  
DT Journal

LA English

AB The sequences of a set of 63 peptides of demonstrated T immunogenicity have been analyzed and compared with 2 different randomly generated sets of sequences. This study indicates a statistically significant tendency of T immunogenic peptides to be constituted of clusters of rare tetrapeptides, as evaluated from the available sequence data banks. This result has been used to locate potential T epitopes in the human immunodeficiency virus (HIV) gag protein. Four peptides corresponding to the best candidate T epitopes (chosen in regions of conserved sequence among different virus isolates) have been synthesized and found to be recognized by a HIV-1-specific, HLA-A2-restricted human cytotoxic T cell line.

IT **60556-70-9**

RL: BAC (Biological activity or effector, except adverse); PRP (Properties); BIOL (Biological study)  
(T-lymphocyte antigenic determinant-contg., structural properties of)

L32 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1989:595370 HCAPLUS

DN 111:195370

TI Collision-induced fragmentation of (M + H)<sup>+</sup> ions of peptides. Side chain specific sequence ions

AU Johnson, Richard S.; Martin, Stephen A.; Biemann, Klaus

CS Dep. Chem., Massachusetts Inst. Technol., Cambridge, MA, 02139, USA

SO Int. J. Mass Spectrom. Ion Processes (1988), 86, 137-54

CODEN: IJMPDN; ISSN: 0168-1176

DT Journal

LA English

AB The collision (10 keV)-induced decompn. (CID) of (M + H)<sup>+</sup> ions of peptides generated by fast atom bombardment ionization has been studied in a tandem mass spectrometer consisting of two consecutive double-focussing analyzers. Two novel fragmentation processes are described; one (termed dn) leads to the formation of N-terminal ions that permit the differentiation of leucine and isoleucine; the other leads to a new set of C-terminal ions (termed vn) and is related to the structure of the amino acid representing the N-terminus of the fragment. The mechanisms of formation are supported by B2/E and B/E scans, which define the precursor and product ions. These and other fragmentations of (M + H)<sup>+</sup> ions under CID conditions and kV collision energies seem to involve fragmentation at a site remote from the charge. The fragmentation processes which (M + H)<sup>+</sup> ions of peptides undergo are related to the site of protonation and the degree to which the pos. charge is fixed at that site.

IT **47924-54-9**

RL: PRP (Properties)

(collision-induced decompn. mass spectra of)

L32 ANSWER 19 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1988:204858 HCAPLUS

DN 108:204858

TI Carbon-13 NMR spectroscopy of indole derivatives

AU Morales-Rios, M. S.; Espineira, J.; Joseph-Nathan, P.

CS Cent. Invest. Estud. Avanzados, Inst. Politec. Nac., Mexico City, 07000, Mex.

SO Magn. Reson. Chem. (1987), 25(5), 377-95

CODEN: MRCHEG; ISSN: 0749-1581

DT Journal

LA English

AB The chem. shifts of 298 naturally occurring and synthetic compds. contg. the indole chromophoric group are listed. Substituent effects on <sup>13</sup>C chem. shifts (SCS) induced by substitution on the heteroarom. five-membered ring are discussed. The data provide a ref. set for future <sup>13</sup>C NMR investigations and highlight the need for unambiguous exptl. evidence to resolve controversial assignments for differently substituted representative indole derivs. Many original assignments have been changed, and values not considered to be unambiguously assigned are delineated. The <sup>1</sup>J(CH) values for the parent indole were measured.

IT **47924-54-9**

RL: RCT (Reactant)

(carbon-13 NMR chem. shifts of)

L32 ANSWER 20 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1986:532044 HCAPLUS

DN 105:132044

TI Immunogenic complex and its use as an immune stimulant, vaccines and reagent

IN Morein, Bror

PA Swed.

SO Eur. Pat. Appl., 65 pp.

CODEN: EPXXDW

PI EP 180564 A2 860507

DS R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE

AI EP 85-850326 851016

PRAI SE 84-5493 841101

DT Patent

LA English

AB An immunogenic complex is prepd. by (1) mixing antigenic biol. material with a solubilizing agent to form a complex between the solubilizing agent and proteins or peptides in the material; (2) transferring the proteins or peptides from the complex with solubilizing agent to a soln. of a glycoside with which they formed a complex serving as a carrier mol.; (3) coupling .gtoreq. 1 antigens or haptens to the carrier. For example, envelope proteins from influenza virus strain PR8 were solubilized with 20% N-decanoyl-N-methylglucamine and sepd. from the core structure by centrifugation through 20% sucrose contg. the detergent at a concn. > than the crit. micellar concn. The collected proteins, with 0.1% Quil A (saponin) added to form a complex, were dialyzed against 0.9% NaCl and coupled to LH-RH with glutaraldehyde. Mice immunized with this LH-RH conjugate showed a strong immune response with no side effects.

IT **60556-70-9**

RL: BIOL (Biological study)

(carrier-bound, as antigen)

L32 ANSWER 21 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1986:551140 HCAPLUS

DN 105:151140

TI Preparation of a monoclonal antibody to common amino acid sequence of LH-RH and its application

AU Park, Min Kyun; Wakabayashi, Katsumi

CS Inst. Endocrinol., Gunma Univ., Maebashi, 371, Japan

SO Endocrinol. Jpn. (1986), 33(2), 257-72

CODEN: ECJPAB; ISSN: 0013-7219

DT Journal

LA English

AB To prep. an antibody directed at the common amino acid sequence of mammalian, avian, and fish LH-RH C-terminal free LH-RH was conjugated with bovine thyroglobulin, and was used as the antigen. A monoclonal antibody (LRH13) was obtained as an ascitic fluid by fusing the spleen cells of a BALB/c donor mouse immunized with the antigen to X63.Ag8.653 mouse myeloma cells followed by limiting diln. cloning and transplanting a pos. clone to BALB/c mice. This monoclonal antibody seems to belong to IgG2b as it was eluted from protein A-Sepharose CL-4B with citrate buffer pH 3.5. Competitive binding expt. using fragment peptides of LH-RH indicated the binding site of LRH13 was a region around serine and tyrosine, and modification of mammalian LH-RH by radioiodination caused a marked decrease in the binding activity. LRH13 has an affinity const. of 0.134 .times. 10<sup>9</sup> M-1 to native mammalian LH-RH, and binds C-terminal free LH-RH with a similar affinity (1.6-fold), however, it binds with higher affinities to N- and C-terminal free LH-RH (12.9-fold), N-terminal free LH-RH (10.4-fold), salmon LH-RH (8.3-fold) and chicken LH-RH-1 (6.0-fold). Chicken LH-RH-II, where tyrosine is replaced for histidine, has a lower affinity (0.3-fold) than that of mammalian LH-RH. From its high affinity to N-, C-terminal free LH-RH, LRH13 is also expected to bind possible precursor peptides of LH-RH. Immunohistochem. staining of the brain sections obtained from rats, mice, chickens, Japanese quail, and rainbow trout successfully visualized cell bodies and fibers distributed from the olfactory bulb to the median eminence, indicating high LH-RH specificity and wide crossreactivity in animal classes of this monoclonal antibody. With this antibody, LH-RH-like immunoreactive substance in the pineal gland was also stained with fixation at neutral pH.

IT 47924-54-9 60556-70-9

RL: BIOL (Biological study)

(monoclonal antibody to mammalian LH-RH binding by)

L32 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1985:516578 HCAPLUS

DN 103:116578

TI Novel activity of human angiotensin I converting enzyme: release of the amine- and carboxyl-terminal tripeptides from the luteinizing hormone-releasing hormone

AU Skidgel, Randal A.; Erdos, Ervin G.

CS Health Sci. Cent., Univ. Texas, Dallas, TX, 75235, USA

SO Proc. Natl. Acad. Sci. U. S. A. (1985), 82(4), 1025-9

CODEN: PNASA6; ISSN: 0027-8424

DT Journal

LA English

AB The hydrolysis of LH-RH [9034-40-6] by homogeneous human angiotensin I-converting enzyme (EC 3.4.15.1) (ACE) [9015-82-1] was studied. Although this decapeptide is blocked at both the NH<sub>2</sub> and COOH termini, it was metabolized to several peptides, which were sep'd. by HPLC and identified by amino acid anal. A major product was the NH<sub>2</sub>-terminal tripeptide, pGlu-His-Trp [35925-21-4], and another was LH-RH-(4-10) [51776-33-1] heptapeptide, indicating that the Trp-Ser bond is cleaved to release the NH<sub>2</sub>-terminal tripeptide. ACE also released the COOH-terminal tripeptide, Arg-Pro-Gly-NH<sub>2</sub> [52699-98-6], and then sequentially the dipeptides Gly-Leu [869-19-2] and Ser-Tyr [21435-27-8], leaving pGlu-His-Trp intact. Thus, pGlu-His-Trp was formed by both NH<sub>2</sub>- and COOH-terminal hydrolysis. The cleavage of LH-RH was inhibited by specific ACE inhibitors and by antibody to ACE but not by inhibitors of other

enzymes, showing that the hydrolysis was indeed due to ACE. In the absence of Cl<sup>-</sup>, the hydrolysis proceeded at only 16% of the maximal rate (in 500 mM NaCl), but in 10 mM NaCl it increased to 64%. In 500 mM NaCl soln., 86% of the hydrolysis was accounted for by the release of the NH<sub>2</sub>-terminal tripeptide, whereas in 10 mM NaCl, the COOH-terminal and NH<sub>2</sub>-terminal cleavage occurred about equally. The K<sub>m</sub> of LH-RH in 500 nM NaCl was 167  $\mu$ M and the catalytic const. k<sub>cat</sub> was 210 min<sup>-1</sup>. When the NH<sub>2</sub>-terminal pyroglutamic acid was replaced with glutamic acid [[Glu]LH-RH [47924-54-9], ACE liberated almost exclusively the COOH-terminal tripeptide in 10 mM NaCl. Thus, human ACE, although it is named peptidyl dipeptidase or dipeptidyl carboxypeptidase, can cleave a protected peptide at the NH<sub>2</sub> or COOH terminus. The enzyme could be involved in the in vivo metab. of LH-RH and possibly other blocked peptides.

IT 47924-54-9

RL: RCT (Reactant)

(hydrolysis of, by angiotensin I-converting enzyme)

L32 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1981:25412 HCAPLUS

DN 94:25412

TI Similar luteinizing hormone-releasing hormone binding sites in rat anterior pituitary and ovary

AU Reeves, Jerry J.; Seguin, Carl; Lefebvre, Fleur-Ange; Kelly, Paul A.; Labrie, Fernand

CS Cent. Hosp., Univ. Laval, Laval, PQ, G1V 4G2, Can.

SO Proc. Natl. Acad. Sci. U. S. A. (1980), 77(9), 5567-71

CODEN: PNASA6; ISSN: 0027-8424

DT Journal

LA English

AB To study the LH-RH [9034-40-6] receptors in the rat anterior pituitary gland and ovary, 125I-labeled [D-Ser(tert butyl)<sup>6</sup> des-Gly-NH<sub>2</sub><sup>10</sup>]LH-RH ethylamide [58978-18-0] was used as a labeled ligand. The binding characteristics were assessed by Scatchard anal. of labeled ligand binding and by potency displacement with unlabeled peptides. Similar K<sub>d</sub> values, ranging from 0.1 to 0.3 nM, were found for the labeled and unlabeled peptides in both tissues. A similar order of potency was obsd. between the binding affinity of 15 peptides in anterior pituitary and ovarian homogenates and their biol. activity on LH [9002-67-9] release in rat anterior pituitary cells in culture. Thus, the LH-RH receptors present in the rat ovary have specificity similar to that of the anterior pituitary LH-RH receptor controlling secretion of LH and FSH. Moreover, the binding affinities of the LH-RH agonists and antagonists can account, at least up to a large extent, for their relative biol. potencies. The possible physiol. significance of these ovarian receptors is discussed.

IT 47924-54-9

RL: BIOL (Biological study)

(release of, LHRH analog stimulation of, structure in relation to)

L32 ANSWER 24 OF 26 HCAPLUS COPYRIGHT 1997 ACS

AN 1981:58576 HCAPLUS

DN 94:58576

TI Specific binding of a potent LHRH agonist in rat testis

AU Lefebvre, Fleur Ange; Reeves, Jerry J.; Seguin, Carl; Massicotte, Jocelyne; Labrie, Fernand

CS Le Cent. Hosp., Univ. Laval, Laval, PQ, G1V 4G2, Can.

- SO Mol. Cell. Endocrinol. (1980), 20(2), 127-34  
CODEN: MCEND6; ISSN: 0303-7207
- DT Journal
- LA English
- AB High affinity binding sites for the potent LH-RH [9034-40-6] agonist 125I-labeled D-Ser(tert-butyl)6,des-GlyNH210]-LH-RH-ethylamide [57982-77-1] are present in dissocd. rat testicular interstitial cells, a prepn. rich in Leydig cells. The iodinated LH-RH agonist binds to a single class of high affinity sites at a KD value of 0.12 nM and the no. of binding sites is approx. 2500/interstitial cell. A close correlation is obsd. between the potency of representative LH-RH agonists to stimulate LH [9002-67-9] release in anterior pituitary cells in culture and their affinity for the testicular binding sites. The presence of specific LH-RH receptors in an enriched population of Leydig cells suggests that these receptors play a role, not only in the antifertility effects of LH-RH agonists, but also in the physiol. control of testicular functions.
- IT **47924-54-9**  
RL: PROC (Process)  
(receptor binding of, in testis)
- L32 ANSWER 25 OF 26 HCAPLUS COPYRIGHT 1997 ACS
- AN 1976:521509 HCAPLUS
- DN 85:121509
- TI Characteristics of anti-LH-RH antiserums induced by two different immunogens
- AU Valcke, Jean C.; Pique, Louis; Cesselin, Francois; Strauch, Georges
- CS Cent. Rech. Endocrinol., Fac. Cochin-Port-Royal, Paris, Fr.
- SO C. R. Hebd. Seances Acad. Sci., Ser. D (1976), 282(21), 1901-4  
CODEN: CHDDAT
- DT Journal
- LA French
- AB Rabbit antibodies against LH-releasing factor were prepd. by coupling the decapeptide to bovine serum albumin using carbodiimide or bisdiazobenzidine. The former method gave better results. Fragments of the decapeptide degraded from C-end did not react with the specific antibodies. Some of the fragments degraded from N-end had the same or higher affinity for the specific antibodies as the native decapeptide.
- IT **60556-70-9**  
RL: RCT (Reactant)  
(immunol. cross-reaction of, with antiserum to LH-releasing factor)
- L32 ANSWER 26 OF 26 HCAPLUS COPYRIGHT 1997 ACS
- AN 1973:124875 HCAPLUS
- DN 78:124875
- TI Syntheses and biological activities of analogs of luteinizing hormone-releasing hormone (LH-RH) substituted in position 1 or 2
- AU Yanaihara, N.; Tsuji, K.; Yanaihara, C.; Hashimoto, T.; Kaneko, T.; Oka, H.; Arimura, A.; Schally, A. V.
- CS Shizuoka Coll. Pharm., Sizuoka, Japan
- SO Biochem. Biophys. Res. Commun. (1973), 51(1), 165-73  
CODEN: BBRCA9
- DT Journal
- LA English
- AB Syntheses are described of [Pro1]-LH-RH, [Orotic acid1]-LH-RH, [Glu1]-LH-RH (I), [Ser2]-LH-RH, [Leu2]-LH-RH, [Gln2] LH-RH and

[Phe2]-LH-RH, (II). The LH-RH activity of each of these peptides was compared with that of natural LH-RH in vivo. I and II had significant LH-RH activity, while all the other analog possessed extremely low activities. These findings are briefly discussed in the of the structure-activity relationship for LH-Rh.

IT **40489-54-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

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